

THE NOR-WEST FARMER.

Vol. 18 ; No. 20.
Whole No. 224.

WINNIPEG, MANITOBA, OCTOBER 20, 1899.

\$1 a Year,
in advance



THE HORSE.

The Horses in the Fall.

Every one who has ever had the care of a horse knows that he sheds his coat twice a year. In the spring he lays aside his warm, heavy coat of long hair and puts on one that is short, fine and sleek. As winter approaches this in turn is shed, and his warm, heavy, winter garment is

THE AUTUMN STORMS.

It is bad practice to leave horses out in cold and storms with the mistaken notion that it toughens them. An acquaintance of mine does this for a regular thing. Last winter he let four horses have the run of a meadow, with an open shed and a hay stack for food and shelter. He argued that they could get some grass when there was no snow and the cold weather would freeze out all disease and "toughen them up" for summer. The weather last winter was equal to the occasion. It froze the diseases out of two of them—also the life. Another died shortly after work began in the spring. After frosty nights become the rule the horse should be housed at night and turned out in the day instead. We should be especially careful to keep him sheltered from the first cold storms in the fall, when his vitality is apt to be below par.

With most farmers this is one of the

waste tissue, heat and action must come from the feed, as well as the building of the new coat. For many years it has been my custom to feed more grain in the fall than at any other season. It has been taught by long experience. I know of no better feed for a part ration than new corn. It is easily crushed, the horse eats it with great relish and it is both stimulating and nourishing. We usually give daily one feed of ground oats and two of new corn, and it is fed at this time rather liberally. By "liberally" I mean six or seven ears. We depend on clover hay for the most part and never feed more than half the grain that some do. Fed in this way we have never had a case of colic from this cause. It always sends them into winter in good flesh, high spirits and fine condition

When writing advertisers, kindly mention The Nor'-West Farmer.



First Prize Shorthorn Herd at Winnipeg Industrial, 1899, the property of John G. Barron, Carberry, Man.

The herd is headed by Topsman, now eight years old, first prize and sweepstakes bull. In other hands he also won first and sweepstakes at Toronto, London and Ottawa this year. The females are: Jenny Lind 4th (imp.), a roan bred by Sir Arthur Grant, Money Musk, Aberdeenshire, Scotland, first prize three-year-old; Red Baroness 3rd; Louisa and Red Bess.

again put on, says J. A. Dobie, in the National Stockman.

We should not lose sight of the fact that the growth of this heavy coat of long hair is a tremendous drain on the vitality of the animal, and nature must be assisted without stint if the horse is to go into winter in good condition. This fall shedding comes when the horse is kept busy at rather heavy work. We have all noticed that he is apt to lose in flesh, is low spirited and peculiarly subject to coughs, colds and so-called "distemper." If he is not given some extra care now he will go into winter in poor condition, and will likely remain so. We should not forget the old saying: "The animal that is in good condition when the cold weather comes, is already half wintered." The horse that is idle most of the time in winter, and has warm, comfortable quarters, can be kept in splendid condition on good hay or fodder and a very little grain, provided he was in good condition when winter closed in.

busiest seasons of the year, and many find it next to impossible to groom the horses as carefully as should be. An authority has said that "one currying is equal to two quarts of oats." It certainly is a great aid in keeping him in condition when shedding his coat. The loose hair is irritating to the skin and is one of the chief causes of his rubbing at this season. Besides, the friction of the currycomb is a great stimulant to the organs, removes all the dandruff and aids a quick, healthy shedding of the coat. All this is brought about by a good daily rubbing down with comb and brush. This is always given to horses for the show ring, the race track and the fire departments of towns. It should not be entirely neglected with the faithful old farm horse.

FALL FEEDING.

But there is one way in which every one may lend a tremendous aid at this critical season, and that is in the way of extra feeding. We must not forget that all

How to Fit a Collar.

In order that the horse may do his work without injury to his shoulders the proper fitting of the collar is of the greatest importance. No two horses have shoulders alike; and it is a rare thing to find the shoulders of any one horse exactly alike, consequently the strict attention to harnessing all our horses should be carefully studied. Every horse should have his own collar; and the changing of collars from one animal to another should never be permitted where heavy or continuous work is required. The collar should fit snugly every part of the shoulder, so as not to make the pressure greater at one point than another. The collar should be neither too large nor too small. It should fit closely to the sides of the neck from top to bottom, and never wide at the top and close at the bottom, nor the reverse. All collars are made over a general form while the leather is thoroughly soaked and pliable, and then when

put on the horse it is hard, stiff and unyielding, which necessitates the muscles of the horse's shoulder adapting themselves to the collar rather than the collar to the shoulder, often producing sweeny, collar boils, blistering the skin, and general injury to the shoulders.

Now as all collars are made over an inanimate form with the leather thoroughly wet and pliant, is not this the most practical system to obtain a perfect fit to the animate form—the horse's neck and shoulders. We are fully satisfied from long experience that this is the easiest, surest and best method, and would therefore advise putting the collar into a tub of luke-warm water and let it soak over night, long enough to make it pliant, and then when ready to put on the horse wipe off the surplus water with a cloth, and fit to the neck at the shoulder from top to bottom very closely, by the adjustment of the hames of the harness. Then put the horse to work moderately, with sufficient load to perfectly adapt the draft surface of the collar to the horse's shoulders, and when dry we have such a perfectly fitting collar to the individual horse that there is very little danger of injury, if the shoulders and collar are kept clean. Collars that fit fairly well when the horse is in high flesh may not be well adapted to hard work when the horse is worked down thin. But by the same method of soaking the same collar may be re-adjusted; but the hame-tugs will have to be raised a little higher than when the neck is full at the top of the collar. The collar should always fit the neck closely at the sides even if it is a little too long but it is preferable to have the collar fit every portion of the neck when the horse is pulling.

The draft of hame-tugs is next in importance and should be as carefully adjusted as the fitting of the collar. If the horse has a sloping shoulder the hame-tugs may pull a little lower down than if the shoulder is straight and perpendicular, but in no case should the hame-tugs pull so low that the draft is near the point of the shoulder. The hames should be raised or lowered to bring the hame-tugs at the proper distance from the point of the shoulder, so that when the horse steps forward with one foot the collar will still rest against the opposite shoulder; but when too low down on the shoulder the pressure will be very hard on the shoulder of the advancing leg and there will be but little or none on the other shoulder. The hame-tugs should be about one-fourth of the distance from the bottom to the top of the neck of the horse, but this will vary more or less with the general make-up of the animal.

Lameness in Horses.

The following, from a correspondent of the London Farmer and Stockbreeder, is quite instructive:—

Among the causes of lameness are weakly conformation of bones, muscles, etc., tissues being too frail to stand the strain; the fetlock may be too long, causing an extra strain on the tendons; the hock may be too angular, predisposing the animal to curb, or too straight up and down, predisposing to spavin; the hoof may show too high a heel, favoring contraction; or too low a heel, favoring corns; puncture, bruises, inferior shoeing—that is, fitting a shoe while too hot; having the shoe press upon the sole instead of the walls; over-taxing muscles, tendons, and ligaments by pulling a heavy load over rough and muddy roads; constant jerking and blows from the wagon pole and harness—all these are causes of lameness.

How to discover when a horse is lame or where he is lame is not so easy a matter as

BREEDERS' DIRECTORY

CARDS under this head inserted at the rate of \$1.50 per line per year. No card accepted under two lines, nor for less than six months.

D. FRASER & SONS, Emerson, Man. Breeders and importers of Shorthorns, Shropshire and Southdown Sheep. Pedigree Poland China Pigs specially, from the best strains in the United States.

W. J. HELLIWELL, Oak Lake, breeder of Shorthorn Cattle, Shropshire Sheep, Barred Plymouth Rocks, Light Brahmas and Partridge Cochins. All kinds of above young stock for sale. Prices right.

R. L. LANG, Spruce Bank Farm, Oak Lake, Man., breeder and importer of Shorthorn Cattle, improved Berkshire Swine, White Wyandottes and White Leghorns. Young stock for sale. 2448

WM. MCBRIDE, importer and breeder of improved Chester White Pigs. Young stock for sale. Pairs and trios furnished not akin. Address—Wm. McBride, Box 253, Portage la Prairie, Man.

JAMES GLENNIE, Arden, Man. Importer and breeder of Holstein-Friesian Cattle. Bull Calves of the famous Teake strain for sale. Write for prices. Box 95.

J. J. MOIR, Glendinning, Man. P. China Pigs, B. P. Rocks, L. Brahmas, S. L. Wyandottes, B. Turkeys, P. Ducks. Orders booked for pigs and eggs.

KENNETH MCLEOD, Dugald, Manitoba, Chester White and Suffolk Pigs for sale. My stock are prize winners at the Winnipeg Industrial Exhibition.

JICKLING & SONS, Dew Drop Ranch, Carman, Man. Breeders of Oxford Down Sheep, improved Yorkshire Pigs & B. Leghorn Poultry. Stock for sale.

JAS. TOLTON, Walkerton, Ont., importer and breeder of Shorthorn Cattle and Oxford Sheep. A number of exceptionally fine young bulls. Prices right.

HENRY LAYCOCK, Rosebank, Man., breeder of Shorthorn Cattle and P. China Swine. Young stock of both classes for sale. Prices satisfactory.

F. W. GREEN, Moosejaw, Assa., breeder and importer of high-class Shorthorns. Some fine young stock for sale, climatised to Western range.

K. McIVOR, Roselea Farm, Virden, breeder of Shorthorn Cattle and introducer and grower of Western (or native) Rye Grass. Seed for sale.

JOHN TURNER, "Bonny Brae Farm," breeder of Polled Angus Cattle. Young stock of both sexes for sale. Address, John Turner, Carroll, Man.

H. VYERS, Macgregor, Man., breeder of Jersey Cattle. Largest herd in the West, headed by Rover Pegis, No. 41020. Young stock for sale.

A. & J. MORRISON, Carman, Man. Breeders of Shorthorn cattle. One 11 and one 24 months old bulls of exceptional quality for sale.

W. C. EDWARDS & CO., North Nation Mills, P. Q. Importers and Breeders of Ayrshire Cattle, Shropshire Sheep and Berkshire Pigs. 1642r

J. VAN VEEN, breeder of Galloway and Hereford Cattle and Shropshire Sheep, Lake View Ranch, Mile Hills, Fort Qu'Appelle, Assa. 1588

BRAMPTON JERSEY HERD. Full stock of A. J. C. Cows, Heifers and Bulls. Extra quality. B. H. Bull & Son, Brampton, Ont.

W. C. EDWARDS & CO., Rockland, Ont., Importers and Breeders of Shorthorn Cattle, Shropshire Sheep and Berkshire Pigs. 1643r

JAS. ROBERTSON, Beaver Brand Farm, Glendale P. O., Man. Poland China Pigs for sale from imported stock. Prices right.

ROBT. WHITE, Wakopa, Man., breeder of Shorthorns. Herd headed by "Crimson Chief" (24057) Young stock for sale.

L. A. BRADLEY, Portage la Prairie, Manitoba, breeder of Tamworth Pigs. Young Pigs for sale.

JAMES RODGERS, Panima, Alta., breeder of Polled Angus Cattle. A few young bulls for sale.

F. J. COLLYER, Welwyn, Assa., breeder of Polled Angus and Berkshires. Young Pigs for sale.

W. M. SMITH, Fairfield Plains, Ont. Ayrshires, Southdowns, P. Chinas, Duroc Jerseys, Poultry.

WM. CHALMERS, Hayfield, Man., breeder of Shorthorn Cattle. Correspondence solicited.

GEO. ALLISON, Burnbank, Man., breeder of Shorthorns and Leicesters. Stock for sale. 2481

STEEL BROS., Glenboro, Manitoba. Breeders of Ayrshire Cattle. Young Stock for sale. 1731f

JAMES STANCOMBE, Cartwright, Man., breeder of Shorthorns. Three choice-bred Bulls for sale.

THOS. MCCARTNEY, Longburn, Man. Ayrshire Cattle, 4 yr old bull David & young stock for sale.

JAMES STRANG, Balduf, Man., Shorthorns. Excellent milkers. Some fine youngsters on hand.

JAS. GORRELL & SONS, Pilot Mound, Man., Short Horn breeders. Fine young bulls. Prices right.

THOS. H. WEBB, Clearwater, Man. Breeder of Berkshire Swine. Correspondence solicited.

A. B. SMITH, Moosomin, Assa. Breeder of Cotswolds, Southdowns; Berkshires, Chester Whites.

WALTER JAMES, Rosser, Man. Breeder of choice Shorthorn Cattle and Berkshire Swine.

GEO. N. HARRIS, Lynden, Ont. Breeder of reg. Berkshire Pigs. Young stock for sale.

JOSEPH TAYLOR, Fairfax, Manitoba, breeder of Shorthorn Cattle. Young stock for sale.

JAMES WILSON, Innisfail, Alta., breeder of Shorthorns. 4 home-bred young bulls for sale.

JOHN S. GIBSON, Morden, Man. Shorthorns and Poland Chinas. Young stock for sale.

H. KINNEAR, Souris, Man., breeder of Shorthorn Cattle. Young stock for sale.

JAS. MURRAY, Breeder of Border Leicester Sheep. Young Rams for sale. Lyleton, Man. 1627r

GEO. RANKIN, Hamiota, breeder of Shorthorn Cattle. Stock always for sale. 2443

R. WADE, Birtle, Man. Breeder of Shorthorns. Young stock for sale.

W. E. BALDWIN, Manitou, Man. Young Tamworth Pigs for sale from imported stock.

ALEX. WOOD, Souris, Man., Breeder of Oxford Down Sheep.

W. D. FLATT, HAMILTON, ONTARIO.



OFFERS FOR SALE

7 IMP. SCOTCH BULLS

16 CANADIAN BRED BULLS

21 2-yr-old Imp. Scotch Heifers,
8 yearling Imp. Scotch Heifers,
15 Canadian-bred Heifers.

Also Cows, including imported and Canadian bred, served by the imported bull "Golden Fame." Prices consistent with quality. Correspondence and Inspection invited. Visitors welcomed.

FOREST HOME FARM.



6 YOUNG BULLS by Manitoba Chief and Robie O'D. y. and out of some of our best cows

9 BERKSHIRE SOWS, of choice quantity and breeding, from 5 months to 3 years.

The standard of our Yorkshire herd is steadily improving. Our stock boars (one winner of Sw epstakes at last Industrial, the other recently imported from England) are grand specimens of the breed. A choice lot of sows ready to breed. About 50 B. P. Rockcockerels, strong, healthy birds of great size and good marking. All at reasonable prices.

ANDREW GRAHAM,

Roland, N.P.R. Carman, C.P.R. Pomeroy P.O., Man.

R. MCLENNAN, Moropano P.O., Man.

Lakeside Stock Farm.



SHORTHORN

COWS AND HEIFERS

of first-class breeding for sale, in calf to imported bull Sir Colin Campbell.

HOPE FARM

ST. JEAN BAPTISTE, MAN.

Headquarters for GALLOWAY CATTLE.

Apply to **T. M. CAMPBELL**, Mgr.

WALNUT GROVE SHORTHORNS.

We are offering five Bulls from 7 mos. to 2 yrs. of age. Stock Bulls (imp.) Warfare (56712) and (imp.) Royal George (17106), and Centennial Isabella, Scotland Yet (23375), also a few Heifers.

A. & D. BROWN, Iona, Ont.

some may imagine. It is best to observe the animal first standing. If the horse points persistently—that is, places the foot in front of the normal position—the lameness is very apt to be below the fetlock. If the knee is affected it is often kept in a bent condition, while in shoulder and fetlock lameness the toe generally rests upon the ground. After examining the horse standing, allow him to go in a slow trot to and from the observer, holding the halter strap about a foot and a half from the head.

usually done in a dragging fashion. The stifled animal either has the lame leg stretched out behind or stands firmly on the sole. In the first case he cannot back and in the latter he cannot move the lame leg forward.

The over-feeding of hay is known to be injurious to horses, both when idle and at work, injuring the digestion and often affecting the wind, and when the digestion



Pair of Prize Cotswolds, the property of A. B. Smith, Moosomin, Assa.

The ram is Snell's 327, by War Plumbe, dam Handsome, (imp.), 4126; he won first and diploma for best ram, any age, at Winnipeg in 1898. The ewe is Coxworth's 100, by Ward's 20, dam Gillett's 4481; she won first and diploma at Winnipeg in both '98 and '99.

Watch carefully the animal's head and ears while he is trotting toward you. He will attempt to protect the lame leg by throwing the most of his weight on the sound one, and if the lameness is in front will nod his head when the weight is thrown upon the sound one. When the animal trots away from you, if the lameness is behind, he will attempt to protect the lame leg by throwing his weight heavier on the sound one.

Having determined which leg is lame, the next thing is to locate the seat of the lameness. If there is any doubt about whether the animal is using its legs properly, take a sound animal and trot it up and down, and compare its actions with those of the lame one. Shoulder lameness is evident by limited action of the entire shoulder. The animal seems anxious to keep stationary, and in bringing the leg forward does so by an outward swinging motion. The horse that is knee-lame aims to keep the knee as stiff as possible, and in moving the leg forward brings the shoulder muscles into play. The leg is advanced in a dragging manner, the toe hardly leaving the ground, and the leg is bent as little as possible.

Fetlock lameness is manifested by a short, jerky step, the animal stepping on the toe or often hopping on three legs. Lameness caused by sore or enlarged tendons is similar to shoulder lameness, and is best examined with the animal at rest, as then the swelling, heat or pain is generally detected along the course of these parts.

It is most difficult to diagnose foot lameness. The best thing is to pick up the foot and tap it lightly with a hammer and notice the flinching when the sore spot is touched. If the animal is nervous it will require great care to distinguish between the actual pain and the nervousness.

Hip lameness is known by a peculiar hopping gait. The animal while trotting turns the hock of the lame leg in and the stiffler out.

Stifle lameness shows itself by the difficulty the animal experiences in elevating this part and bringing it forward, which is

impaired colic is readily developed on a little over-feeding, especially if the horse is idle, and even when at work he comes in hungry and gulps down his feed and allowed to drink freely soon after. Colic cure or some pain killer should be kept for instant relief. If horses are watered before feeding, and fed bran and chopped hay and oats, wet up a little—and the more oats the better—you will seldom have any trouble from colic.

An English exchange has an interesting article on the care of the teeth in horses.



First Prize Yorkshire Sow, with Litter, at Winnipeg, 1899, the property of Jas. Bray, Longburn, Man.

The sow is Dewdrop Beauty 2596, sired by Beauty Boy; the litter is sired by Snowman II.

Foals often suffer from bad teething, or rather from slow cutting of the teeth, which prevents their sucking properly. The teeth can be helped through by cutting the gums with a sharp finger nail, or, failing that, with a knife. This should be seen to a few hours after the foal is dropped. For grown-up horses the same attention is necessary. A large transfer company now, as the result of past tests, gets the teeth of every horse it buys carefully examined by a vet., thus saving a lot of feed and at the same time keeping the horses in much better health.

that supply them with their drinking water.

The main point in the winter's management is to get them through with the loss of as little of their summer gains as possible, accordingly early in November a grain ration is served out. Beginning with one pound a day for each animal the ration is increased one pound a month until by March they are getting five pounds each per day.

The cattle are kept off the grass until there is a good full bite. If they get at the grass too early they refuse to eat the

CATTLE.

Economic Beef Production.

How to finish beef cattle most profitably will continue to be a live question for some time in the mixed farming districts of Manitoba. One of the best guides in this business is the ripe experience of live men. Among the most live are Dr. D. H. Harrison and his able lieutenant, John Cook, of Newdale. They have been in the business for years and on a pretty extensive scale, too, and think they now have the feeding of cattle down pretty fine. We have been following the details of their work for years and just how they do it and the results we propose now to state as concisely as possible. In the plan which they have found most satisfactory, winter beef making is left alone, and they aim at turning out a lot of big, hard finished beef for export just before the first slippery beef from the west comes in off the grass. Their plan of action, evolved from years of actual work, has resolved itself into something like this shape. The cattle, good two-year-olds and slow three-year-olds, are bought in the end of summer, and, in selecting their cattle, as few underbred ones as possible are taken. Between flytime and winter every one is dehorned and so prepared for feeding quietly and in the smallest space. As soon as the pastures begin to fail hay is fed until the weather gets colder, when oat straw is introduced and later on wheat straw. As the weather gets colder hearty cattle will eat straw freely and it is too valuable to be made into bonfires.

The cattle have the run of a roomy shed, a basement stable and the shelter of bluffs. The yard around the shed is sheltered on the north and west by a wall about 15 ft. high. It is made of a double row of poles and the space stuffed with straw. In the shelter of this windbreak the cattle lie out the coldest nights in preference to going into the basement stable. During the day the cattle are around the yards or in the shelter of bluffs which surround the splendid springs

straw and if there is not grass enough to support them they lose flesh. Most farmers want to turn out as soon as possible and cut off extra rations, here the opposite practice is followed. The animals are kept in as long as possible and more grain fed than in winter. The new grass, though sweet, has very little feeding value in it, therefore the grain ration is kept up when the cattle go out on grass and the regular monthly increase of one pound is made, so that in June the animals are getting eight pounds of crushed grain per day. Under this good feeding the cattle, which always come through the winter in good condition, gain rapidly and are in excellent condition by July.

Great stress is laid upon regularity in feeding. The cattle rise in summer with the first light and feed while the dew is on. Punctually at 5 a.m. one half the day's ration is fed in long boxes, when every beast has an equal chance, and at the same hour at night the rest is given. The cattle rest in the middle of the day. Regularity pays. No animal looks for feed till feeding time and then makes the best profit out of what it does get.

The benefit of this style of feeding is shown in the bloom of the cattle being maintained all through their trip to England and they feed as quietly on the road as on the farm they left. They sell at top prices, too, which is the main thing. Dr. Harrison takes no stock in winter feeding. Animals put on a train here, exposed, perhaps, to the severest weather in transit, have no show with winter fed. Ontario stock brought a half day's journey from their own stable, and therefore always sell at a disadvantage. Summer transport for cattle fed by his method takes nothing to speak of from their value and they look little worse than if driven from the field they grazed on.

By this mode of handling much roughage that would be in other hands worthless is turned into good manure and every possible cent of value is taken out of every ton of grain feed supplied. By the heroic and pushing style sometimes followed in winter feeding more or less of the food given fails of perfect digestion and goes to the manure heap. It takes well on to a twelve month to finish an animal by Dr. Harrison's plan, but any practical feeder can contrast it with the high pressure style and draw his own conclusions.

It may be pointed out here that the whole history of feeding for profit is in accord with Dr. Harrison's line of action. At one time it was thought necessary to crowd fattening animals from the start with a heavy grain ration, now Professors Shaw, Henry, Robertson and Day all advocate more moderate feeding and show by the result of their experiments that it pays best. In another place in this issue we give an epitome of Professor Day's last winter's feeding.

Don't scrimp food for man or beast. Better three thrifty calves than four starveling runts.

It pays to keep all our stock comfortable, and it is a poor policy to leave calves or milch cows out in bleak fall winds or storms of rain and sleet.

There must be a friendly feeling between the cow and the milker, and the milker should not be changed oftener than is absolutely necessary. A cow will give more milk to a milker that she likes than one she is afraid of.

Feed the calf liberally on the kinds of food which are given to the cow in order to produce large quantities of milk. Such food contains just the material that will promote rapid growth, but does not produce large quantities of fat.

Marchmont Stock Farm.



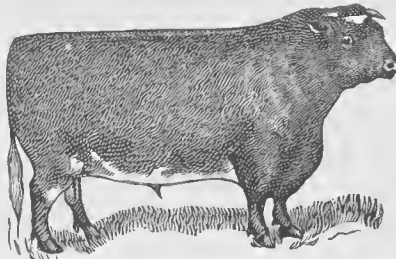
SCOTCH - BRED SHORTHORNS

I have now on hand for sale the 4-year-old bull Crown Jewel 16th (the heaviest and thickest hull ever shown at Winnipeg), 3 yearlings—one Ontario bred, and 17 hull calves, one imported in dam.

At moderate prices. Also **BERKSHIRE PIGS.**

TELEPHONE 1004B.

W. S. LISTER, Middlechurch P. O.,
(7 miles North of Winnipeg.)



J. E. SMITH Importer & Breeder,
has for sale—

CLYDESDALES—Stallions and Mares, all ages.
SHORTHORNS—Bulls, Cows and Heifers.
HEREFORDS—Bulls and Heifers.

All animals registered in their respective herd books. Everything for sale, except the stock bulls Lord Stanley 2nd and Golden Measure. If notified, visitors met at the station. Come and see the stock. Satisfaction guaranteed. Write or wire—

J. E. SMITH, P.O. Box 274, Tel. 4, SMITHFIELD AV., BRANDON.

HOLSTEINS & YORKSHIRES

A few young Holsteins for sale. Also
Yorkshire Pigs.

A. B. POTTER, Montgomery, Assa.

PURE BRED AYRSHIRE CATTLE.

Imported from Scotland, of the very best prize winning milking families, possessing large size, robust constitution, beautiful udders and large teats. Gold Medal herd from 1893 to 1897 at leading Canadian shows. Great prize record. Not been exhibited since. Choice Tamworth Swine—The bacon pig of the day. Stock all from noted prize-winners. Choice Collie Dogs—Imported and home bred. Won all leading prizes in Canada up to 1897, also second at New York Bench Show in 1897.

Stock all ages for sale.

R. G. STEACY, Importer and Breeder,
876 Box 720, BROCKVILLE, ONT.

PIONEER HERD OF SHORTHORNS



I have been breeding Short-horn Cattle right here for over a quarter of a century. I breed my own Show Cattle, and last year had at the Winnipeg Industrial the Gold Medal Herd. First for Bull and two of his get, and first for Cow and two of her progeny. I usually have stuff for sale, and am always pleased to show it.

WALTER LYNCH, Westbourne, Man.

OAK GROVE FARM.

SHORTHORN CATTLE
and
LARGE, IMPROVED YORKSHIRE SWINE



Orders booked now for Young Pigs. Among the Shorthorns recently imported from Ontario, I have for sale a few very fine heifers.

JAS. BRAY,

Longburn, Man.

When writing advertisers, kindly mention The Nor'-West Farmer.

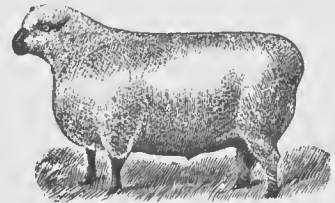
J. A. S. MACMILLAN

IMPORTER OF

Clydesdale, Shire and Hackney STALLIONS,

Has a few choice ones for sale; also

Pure Bred Shropshire Sheep.



Rams and ewes from the most fashionable imported blood. Inspection invited. For full particulars apply
2238

Box 483, BRANDON, MAN.

Prairie Home Stock Farm,

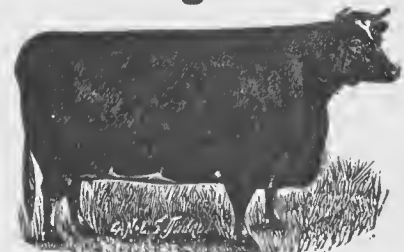
CRYSTAL CITY, MAN.



**Shorthorn and Ayrshire Cattle
Shropshire Sheep
Yorkshire and Berkshire Swine.**

Address all communications to **JAS. YULE, Mgr.**
2260 **THOS. GREENWAY, PROP.**

Choice Young Bulls for Sale!



Sired by **TOPSMAN**, the champion Short-horn Bull at Winnipeg and Toronto in 1899, and **STANLEY 6th**.

Anyone wishing to obtain a bull possessing individual merit and of high breeding can make no mistake in writing

J. G. BARRON, Carberry, Man.

J. McGREGOR & CO.

Breeders and Importers of

Western Range Horses

100 head of Agricultural, Driving and Saddle Horses now on hand.

TERMS AND PRICES RIGHT.

Barns and Corral corner of 13th and Rosser Ave.

Ranches—Rosebud and Bell, Montana.
Towner, North Dakota.

Head Office: **FLEMING BLK., BRANDON.**

Selling Agents at all principal points.

WILLOWDALE STOCK FARM.

**SHORTHORN CATTLE and
CLYDESDALE HORSES.**

3 Young Bulls for sale. A number of young Bulls sired by Caithness.
PURVES THOMSON, Pilot Mound, Man.

Heavy vs. Light Grain Rations for Fattening Steers.

Owing to the abundance of feed and plenty of grain there should be a larger number of good steers put up to fatten this fall than usual. Prospects for good prices are such that there should be a wide margin for any enterprising farmer who will put in a bunch of steers and feed them as Dr. Harrison does at Newdale. Make these steers use up the straw instead of burning it. The meal ration given these steers may be light to begin with, increasing it gradually as the steers become accustomed to it and as the winter progresses. That this is the most economical plan is borne out by the experiments conducted by Professor Shaw at the Minnesota Experiment Station and by Professor Day at Guelph. A little over a year ago the results of these experiments were given in the columns of *The Farmer*. The results of Professor Day's experiments for the third year, along the line of

thirds of a lb. of meal per cwt. It was increased a little, but the average for the fattening period was the same as that commenced with, two-thirds of a lb. per cwt. live weight. With the heavy ration steers an effort was made to feed one lb. per cwt., but it was found impossible to do this and the average for the fattening period was only nine-tenths of a lb. per cwt. In the other experiments ensilage was fed; in this one none was fed.

The results, briefly stated, are as follows:—

The heavy ration group made an average gain of 1.77 lbs. per day, at a cost of 7.68c. per lb. of gain.

The medium ration group made an average of 1.74 lbs. per day, at a cost of 7.22c. per lb. of gain.

The light ration group made an average gain of 1.62 lbs. per day, at a cost of 7.21c. per lb. of gain.

In this as in the other experiments the heavy ration steers made the gain that cost the most, while those getting the light ration made the cheapest gain.



A Useful Animal.

This bull, the property of H. Freize, Arden, Man., is shown in the illustration about to start work on a treadpower. Mr. Freize evidently does not believe in having waste power around his place, therefore the bull, by means of a belt connecting with the power is made to run the cream separator, barrel churn and washing machine.

feeding a light meal ration as against a heavy one, have just been made public and we herewith give a summary of them.

In these experiments a heavy, medium and light meal ration was fed to three different groups of steers. The meal used was an equal mixture of corn and oats. The other feed was inferior hay mixed with pulped roots a day in advance of feeding. The roots and hay were mixed in the proportion of 20 lbs. roots to 15 lbs. hay. Each animal was fed all it would eat of the mixture.

The quantity of the grain ration given was the point where the feed differed. The object was to feed such foods as any farmer usually has on his place. The steers getting the light grain ration received only one-third of a pound per day per hundred lbs. live weight to begin with. This was increased until at the close of the fattening period in May the steers were getting as much as nine lbs. of meal a day. The average for this lot would be about one-half lb. of meal per cwt. live weight per day. The steers getting the medium ration were started on about two-

Briefly summarized these three experiments show:

Cost of 1 lb. Gain in	Heavy Ration.	Medium Ration.	Light Ration.
First experiment..	6.37c	5.59c	5.91c
Second experiment..	7.70c	7.26c	6.46c
Third experiment..	7.68c	7.22c	7.21c
Average	7.25c	6.69c	6.53c

The following is Prof. Day's conclusion:—

"It would seem, therefore, that when the fattening period extends over six months or more, the animals should be started on a very light meal ration, which should be increased as gradually as circumstances will allow. In this matter the feeder must be guided by the rate at which his animals are gaining. The aim should be to have the animals ready for market on the day they leave the stable, and not the day before, if it can be helped. After a steer is finished, he is fed at a loss, so that an effort should be made not to have him finished long before he is shipped."

The rough fodders of our farms can be converted into beef if the farmers only thought so. From these experiments one can see that the meal ration need not be so very heavy to secure liberal gains. We would like to see more of our farmers try feeding steers during the winter. If good steers cannot be purchased, get them from some of the large firms to fatten, receiving so much a pound for the flesh put on. Or another good plan is to get a bunch of good calves or yearlings and grow them, or, if you have considerable hay and meal, you might make baby beef of them.

How Cattle are Prepared for the Show Ring.

At a recent meeting of the Ohio Short-horn Breeders' Association, C. L. Gerlaugh, a noted Shorthorn breeder, read a paper giving his plan of fitting animals for the show ring. To those who have admired the sleek, well-groomed prize cattle at the shows his article will be interesting reading, as showing the great trouble the fitting of a show herd entails. The young breeder may find in it many helpful suggestions:—

I think the intent of this subject was to encourage the young breeder in showing his best individuals at our state fair, and as we have just passed over our show day it is necessary that we begin preparing ourselves for the show of another year. I have been asked many times at our fairs, How long before the fair did you commence feeding your cattle? The exhibitor should have his stock selected early in the year (by the holidays if possible) that he expects to show at the coming fall fairs.

As a beginning I might say the first step is to select the animal right. It matters little what you feed or how you prepare it if your animal is not of the right sort to consume it. I mean by this, is the bone formation of the animal such as to warrant the expense of feeding and the amount of labor necessary to be put on it to make a creditable show, or a winner in its classes? Get the bone formation right to begin with, and then with time, proper feed and labor your stock will develop satisfactorily.

THE FEED.

As to feed we have a great many different views and opinions, and various results. The popular animal in the show ring at present is one that has the flesh thick and smoothly laid on, without patches over ribs and back, without monstrous bunches to each side of tail head. Now the best feed to use is the ration that will produce the smooth form that is in demand. In feeding different animals you will find that some individuals will grow much smoother than others, consequently the feeder must watch his cattle very closely and increase or diminish his feed as his best judgment directs as to quantity. I generally use ground corn and wheat bran, equal parts by weight, and about one-fifth ground oats, with cut hay for more bulk. I prefer to dampen the cut hay first and then put my feed on and thoroughly mix with my hands. About 18 pound daily is as much as the average cow will consume. Sweet corn planted early, as soon as the ground is warm enough to germinate seed, will be ready to use for cutting by July 1st instead of hay, and you will find the cattle very fond of it. Your females should be turned out of stables at night throughout the summer season in a good blue grass pasture about sundown—as soon as the flies will let them graze and rest comfortably.

Soon as cattle are out of stables clean out all wet straw and rebed stable with nice dry wheat straw before leaving the

barn for the night. You will find it very convenient to have your straw baled for summer use, as you can do the baling in the fall just after threshing and store away in a very small space (I have used this year over 100 tons of straw, 50 of which were baled.) Through the summer months cattle should be returned to the stable about five o'clock in the morning, before the flies begin to worry them. Feed at six o'clock in the morning, at eleven for noon and five in the evening. I would also feed some mangels after each feed if I had them. We generally feed them whole, without cutting; think cattle are not as likely to choke as if they were cut in pieces. If I were to cut them I would run them through a beet pulper and mix with feed. Always water before feeding instead of after.

THE CALF.

We consider the calf one of the important cares. It should be calved in the month of November or December, so it will have the same advantage in age as the others in competition with it. It will only be a few weeks until the calves will develop so you can begin to form an idea which one you would prefer to give the extra care. Your calves should all be well fed and started to eat as soon as possible. I think a feed of equal parts in weight of shelled corn, wheat bran and oats is one of the best feeds for young stock. I use some oil meal also generally. Feed just what they will eat up clean with a small handful of nice sweet hay. If they don't clean up feed in the trough, clean it out nicely at once, as they will not eat it after lying for some time. I have never found anything better than an extra nurse cow for forcing a calf that you wish to show. It develops the form nicely, milk being a perfect food in itself, developing bone, muscle and fat equally. The nurse cow should have udder and teats as near the same as dam of calf as possible. It is very hard to teach some calves to nurse another cow unless they have been in the habit of stealing. If one cow is not sufficient let them have another, as their wants should be satisfied, and they should have milk until ten or twelve months old. I have seen some breeders let them nurse considerably longer, as I saw a white face bull sucking at a Holstein cow at the Illinois State Fair last fall that was shown in two-year-old class.

I think you will find it necessary to keep your bull calves stabled that you intend showing, as I find they take too much exercise if left out in lot or field over night. They are inclined to romp too much and don't keep quiet. The better plan is to give them a nice clean bed of straw and early in the morning before the flies become bad have a boy lead them in the grass lot for half an hour. The dew on the grass cleans the feet nicely and you are not bothered with washing their feet as you will have to if they are kept in entirely, and they will also have as much exercise as will be necessary.

The Shorthorn breeders of Ontario take a great deal more interest in feeding and fitting their young animals than the breeders of this country. If a breeder in Ontario has one or two calves he thinks good enough for a creditable show he fits them and attends the show. I think our breeders have become too careless about exhibiting their young stock, not caring for it as they should to get profitable results. If you drive through the country and see the different pure-bred bulls you will only find a small per cent. of them in shape to present to a buyer.

VALUABLE.

"The Farmer is too valuable to grudge \$1 a year to."—M. M. Esplin, Bru, Man.

WOODBINE FARM, CARBERRY, MAN.



AYRSHIRE CATTLE.

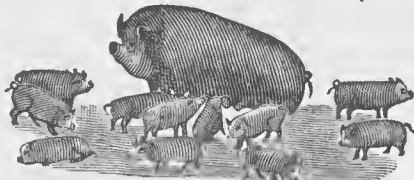
YORKSHIRE SWINE.

S. L. WYANDOTTES.

A few choice 3-months-old boars for sale, sired by Lord Hastings (2515). Booking orders now for fall pigs.

S. J. THOMPSON & SON.

GOLD STANDARD HERD OF REGISTERED BERKSHIRES.



SALES BOOMING. CUSTOMERS PLEASED.

Spring boars all sold. A few nice young sows left, from 4 to 6 months old; also a grand litter farrowed July 19 from "Rosamond," the mother of prize-winners; also a lot of August pigs for sale. Some grand young B.P. Rock cockerells, \$2 each. Correspondence solicited. Address—

J. A. MCGILL, Neepawa, Man.

Thorndale Stock Farm

JOHN S. ROBSON,
MANITOU, MAN.

Breeder of SHORTHORNS. Long established, reliable pedigrees; straight dealing always. Young stock of both sexes always on hand. Write early if you want them. 2185



ALEX. D. GAMLEY



Leicesters for sale—

40 RAM LAMBS,
8 YEARLINGS
40 BREEDING EWES.

Box 193, BRANDON.

Ridgewood Stock Farm, Souris, Man.

WM. SHARMAN

BREEDER OF

High Class Herefords

A few early Bull Calves for sale.

JERSEY BULL FOR SALE.

No 50202, 2 years old in February. Solid color, black tongue and switch. Took 1st prize in Winnipeg as calf.

H. R. KEYES, Midway, Man.



CHOICE-BRED

Shorthorns.

For sale a number of Shorthorn COWS and HEIFERS, a well bred and well made lot.

JOHN RAMSEY, Priddis P.O., ALBERTA.

Plain View Stock Farm.

PORTAGE LA PRAIRIE, MAN.

F. W. BROWN

Importer and Breeder of

SHORTHORNS, COTSWOLDS, and BERKSHIRES.

My stock are strictly in it yet. Young stock constantly on hand and for sale. Write for prices, or call and see. Visitors always welcome.

EVERY STABLE REQUISITE

Correspond with us if you require new or second-hand Carriages or Buggies of any description. New or second-hand single or double Driving or Work HARNESS, SADDLES, BRIDLES, RUGS, ROBES, BLANKETS, etc.

We have the largest and oldest-established Horse Market in Canada. Auction sales every Tuesday and Friday throughout the year. Private sales every day. Consignments solicited. Special terms made for car-loads.

WALTER HARLAND SMITH,

AUCTIONEER AND PROPRIETOR,

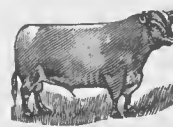
"Grand's Repository," Toronto, Canada.

Established 1856.

D. McBETH, OAK LAKE, MAN.

BREEDER OF

Clydesdale Horses AND Shorthorn Cattle



I have a number of promising young Stallions for sale.

My Shorthorn herd is headed by "Best Yet," bred by Hon John Dryden, of Brooklin, Ontario. A number of young stock of both sexes, all registered, are for sale, and can be recommended as first-class animals.

Correspondence solicited. Prices right.

R. REED-BYERLEY, Cook's Creek, Man., breeder and importer of Clydesdales. Headed by Gem Prince, sired by Cedric. Correspondence solicited.

FOR

HEREFORDS

CALL ON OR WRITE TO

J. E. MARPLES,

Poplar Grove Farm, Deleau, Man
(Pipestone Branch C.P.R.)

J. C. & A. W. FLEMING PILOT MOUND, MAN.

Breeders of Cotswold Sheep, Poland Chins Pigs, Barred Rocks, and other breeds of poultry.

Growers of all the best varieties of POTATOES. Seed for sale.

Send for Catalogue, and mention this paper.

W. L. TRANN, CRYSTAL CITY, MAN.

Proprietor of Boundary Herd of

POLAND CHINA SWINE



Our herd are direct descendants of such noted hogs as Canada Wilkes, Guy Wilkes 2nd, M. P. Sanders, and the Tecumsehs. Nothing but first-class stock shipped. Write for what you want; satisfaction guaranteed. Prices always reasonable. Nothing but choice sows kept for breeders. We are now booking orders for spring pigs of 1899. We have a few good winter pigs for sale. Write and describe what you want, and we will endeavor to treat you as we would wish to be treated.

Ayrshire Cattle. Red Tamworth. IMPROVED YORKSHIRE & BERKSHIRE PIGS.

A good selection now on hand, and will quote close prices to reduce stock.

Caldwell Bros, Briery Bank Farm, Orchard, Ont.

When writing advertisers, mention The Farmer.

Possibilities in Stock Production.

The other day it was announced that beef had been sold at Chicago for seven cents, live weight, perhaps the very highest price ever paid on this continent for butcher's cattle. Pork goes at about equally satisfactory figures for the grower. Good horses are in equal request. Not the nondescript or fancy sort, but horses for real every-day work. Good cows can hardly be bought at any price. What does all this mean? Is it a mere boom, or is it solid business? There is bound to be a lull in railroad construction at home and the high price going for butcher's meat in the great centres to feed the well-paid workers may be partially met from outside points, such as the Argentine and New Zealand. The greater part of Australia will have work enough in the next five years to replace the sheep killed by drouth and the cattle killed by ticks. But so long as there are well-paid workmen by the million who want good food, so long are good live stock bound to be worth good money. The best is wanted, and it pays now more than ever before to grow and feed it.

Are we in the Northwest prepared to take our full share in the work of supplying these markets and the profit such work is sure to bring? We are, and we are not. We have one of the healthiest climates for stock in the whole world, and we can raise the best of food cheaply and in abundance. But we want to bestir ourselves a great deal more than the most of us are yet doing if we are to make the money we ought out of the live stock we raise or ought to raise. Work alone won't do. Without steady work we can't do it, but one good head in this and most other businesses is worth two pair of hands. Accurate knowledge is far too rare with any of us. "Knowledge of what?" says one. "I have known about stock all my life. Why, I have owned and worked a separator for years, while most of my neighbors are not past the shallow pan method of raising cream." That, my worthy friend, may be all true, but still even in that you may be only half taught.

How old are those calves of yours, and how are they fed? "Well, they get plenty of separated milk warm from the cow, and a little help from good hay as well." That, my good friend, is not all. Calves must have something to make up for the cream you are taking out of that milk, and yours don't look as if they got it. "Well, no; they should have a bite of chop or linseed meal, even; but we are far from the mill here, and shorts are awfully dear," etc., etc. This is the way it goes even with men advanced enough to need a separator, and, of course, those calves, being robbed of what must be provided if they are to get justice and make the profit we seek, get stunted and mean and lose a whole year's growth, and daily advertise to every one that has the faculty of reading without the help of books that their owner, however much he may be pleased with his own fancied superiority, is really less than half taught in the business of stock feeding.

He has still got to learn the very fundamental laws of animal life, and must learn these if he is ever to make the success he ought to along that line of business. These laws are more imperative and less alterable than those of the Medes and Persians. Their substance may be epitomized in a few inches of printed column. Breed only from the best, whether graded or pure, and always use a pure bred sire, rich in the faculty of making good growth out of plain but nourishing food. Take care that your stock gets that in proper proportions and suited to its digestive powers. The food best suited

to the stomach of a horse or pig will not suit a cattle beast and vice versa. Don't feed in a go-as-you-please style. Study to learn the best and cheapest for each beast under your care and make it an unvarying rule that it shall be fed regularly all it can turn to good account.

Stunting and pampering are both to be avoided. Do a lot of reading, thinking and planning. Watch the effects of both your own work and that of the most progressive of your neighbors. If you do make a blunder, try to steer clear of the same error in the future. Don't care for mere show fitting at any time. "My flock," said a highly successful poultry man to us the other day, "are always in show condition, because they get the care they need all the year round."

There, in a single sentence, is the secret of success, and no matter whether it is a \$500 bull or a 25-cent chicken, no other way will pay.

"Live men wanted," we read in the advertising columns of every newspaper. It is live men that have made Canadian dairy produce so successful on the world's markets. It is live men in the line of cattle breeding that have made a name for our stock all over this continent. Young Abbottsburns are not produced by lucky hits, but by staying with the business all the time and putting your whole soul into it. Study your own animals and learn on them and from them. It takes pluck and perseverance as well as skill. Nothing easier than to slide down and stay down.

The man who will work on those lines has to-day opportunities never before attainable in the history of stock growing and feeding. He don't need free bulls or boars from anybody and will rather take it as an affront to be offered one on the assumption that he is too mean to provide one for himself and is hardly fit to be trusted with one when he does get it. There is no magic in breeding. You can't lift yourself out of the mud by hauling all your might on your boot straps. But you can get there all the same and with more chances for both profit and self-respect than ever before. The man who will start and persevere in that track is as truly a missionary as if he went to Central Africa, and in some places not as far away he is about as much needed.

Reliability of Tuberculin.

Among old country stock men there has for some time been a very bitter controversy going on regarding the reliability of tuberculin as a test for tuberculosis. Dr. McFadyen wrote very candidly and sensibly on the question, but the old school of practitioners who are, of course, themselves infallible, allege the test is defective because it is not infallible. Sometimes it reacts when the disease cannot be discovered by post-mortem, being too recent for that. And it occasionally fails with cattle so far gone as to be immune from the effects of the drug. In a recent lecture before the Royal Agricultural College at Cirencester, Eng., he takes the following very sensible view of the matter:—

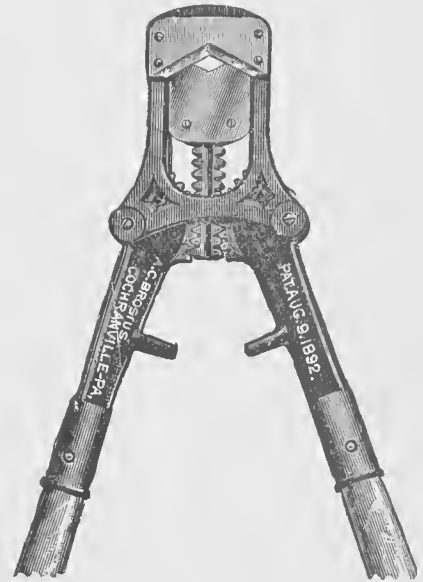
"With reference to tuberculin, that preparation was now gradually beginning to be accepted as the most satisfactory means of diagnosis. As now used, from 40 to 60 drops are injected by means of an ordinary hypodermic syringe, the standard for a good operator being three cows every minute. Used in that form it had been found from experience, throughout Europe and in America, that the preparation could safely be relied on as a diagnostic agent, and that the errors were something like ten per cent. Of these ten per cent., in about half of them, there was no doubt about the animals being tuberculous—

old, chronic cases, and in such cases the tuberculin had no influence. The other five per cent. were cases in which reaction had taken place and no lesions were detected, and it was suggested that that was because the operator had not carried the examination far enough. No doubt, under some conditions, a reacting animal might be found apparently to give no sign of the disease, but it was not safe to conclude that the beast was perfectly healthy. As to the reliability of the test, when it was properly performed the injection of tuberculin was, he said, as near infallible as probably anything in the world could be. It was not only far in advance of any other method of diagnosis, but the risks of error were so small that they were not worth taking into calculation."

Dehorning.

We can all remember when public sentiment was overwhelmingly opposed to the dehorning of cattle and when the practice was regarded as unnecessary and extremely cruel. In looking back over the early efforts in this direction and taking into account the crude instruments then in use we must agree that the last conclusion was in a measure correct. Since then, however, the dehorning of cattle has come in for its share of study and experiment by intelligent men of inventive genius and this more modern and humane instrument is the result. It is not unfair to assume that this Keystone Dehorning Knife has had much, very much, to do with the marked change in public sentiment on the dehorning question.

This knife, which has been regularly advertised before our patrons for several



years, was invented and is being manufactured by the Keystone Dehorning Co., Picton, Ont. Its strongest feature is in the peculiar shape of the cutting edges or blades, which, as will be observed from the cut here shown, are so formed as to cut evenly on four sides at once. The form of knife together with the powerful levers are responsible for a quick, clean cut, obviating entirely the cruel and painful operation of the straight, rotary or shear principle knives, which always result in more or less crushing and bruising of the horn. This was the dehorner that took highest award at the World's Fair at Chicago in competition with the best similar devices then made. Like most good things, the Keystone Dehorning Knife has a host of imitators, and the inventor has been obliged in a number of cases to proceed by process of the law to protect himself.

The Adaptabilities of the Shorthorn.

At a west of Scotland farmers' meeting Mr. D. Wood gave recently an interesting address on British breeds of cattle. He pointed out that in the main the various breeds were well adapted to the local environment in which they are found, but the Shorthorn has by much the widest range both in location and varied adaptation.

"Regarding the Shorthorns, it may be said that in their ranks are found three distinct types—the purely beef producer, the angular dairy cow, and the nearest approach to the all-round cow of any animals in existence. This is an ideal that has been long aimed at—the all-round cow; but we have no hesitation in saying that there is a fallacy underlying the idea that any one animal can combine in itself all the best properties of all breeds. We do not deny that there are some animals that are good milkers, and after that purpose is fulfilled fatten off into good commercial beef; but we do emphatically deny that any animal can use one lot of food for two purposes. What a cow uses up for milk cannot be used for flesh formation, and vice versa. And we go a step further, and say that long and careful observation has shown beyond the possibility of a doubt that the round-barrelled cow, thick and fleshy behind the shoulders, short in the neck, heavy and fleshy at the buttock, and of a generally smooth outline, is never a good milker; and, on the other hand, it is the angular cow—often even ugly—that nine times out of ten gives the richest milk, and the most of it, in proportion to the food consumed. Your ideal, all-round Shorthorn cow lies in between animals of the type of the Queen's beautiful heifer Frederica that won the championship at Smithfield in 1895, and any first-rate Jersey cow. You can get your all-round cow, undoubtedly, but when you have got her you have given up something of Frederica's beautiful smoothness of outline and propensity to lay on flesh, and something of the Jersey's or ugly cow's propensity to give rich milk. Cows passing under the general term of Shorthorn include the three grades—viz., the beautifully-modelled flesh-producer, that scarcely produces sufficient milk to rear its own calf well; the plain, angular cow that gives a large quantity of rich milk, but is an indifferent feeder for beef and the intermediate animal that partakes of the characters of both the foregoing, but is not so good as either for its special purposes.

"All nature's designs are harmonious. If the external form of an animal is eminently suitable for carrying beef, the internal organisms are peculiarly adapted for that purpose; and if the internal organisms of milk production are highly developed, the external form is built accordingly. Nature does not enclose such highly-developed milk-producing organisms in a round barrel-like frame, as that would be a waste of material. No; she builds up an angular frame, sharp in the roof, roomy chest below, great depth of side, giving ample room for storage and digestion of food. It may be set down as an incontrovertible fact that the very first condition for the production of a large amount of milk is the possession of large and healthy digestive organs; but let it also be remembered that this is a common necessity for both milk and flesh production, but after digestion the resulting products are passed on to entirely different sets of organisms, and neither can perform the work of the other. As to the actual generation of milk, scientists are not yet agreed upon the point, but they are agreed upon the general formation that indicates the possession of great

milk-producing power, and this power any men of sound sense whose eyes are not blinded by the dust of prejudice or downright ignorance can see for themselves."

Mr. Wood cited many cases to show that the good-looking cow as a general rule gives a poorer milk than her more angular rival.

Cattle of the Future.

Charles Goodnight is one of the wealthiest and most prosperous of all the Texas cattle breeders. He keeps as a fancy a herd of buffaloes, but makes his money out of cattle raising. He is satisfied that range stock raising must shrink and farm feeding of better bred stock be the main source of supply for American beef. The big herd will soon be a thing of the past, even in Texas.

"If," said he, "farmers could realize the importance of starting with good stock and pushing the growth of the calves from their birth, they would soon learn of the profit to be made on the farm from a few head of cattle." Those who are engaged in the business at the present time are making more money than any other class of farmers. He regards the Polled Angus as the very best breed for the ranchman or stock farmer, and says that it is only a matter of time when the western country will give them preference over all other breeds. With the high price of land and the scarcity of stock he does not believe that the price at any time in the future, unless during a panic, will be lower than it is at present.

See that all the stables are in readiness for use in ample season. Then when a cold storm comes on, as is so frequently the case at this season, it will be an easy matter to run them in.

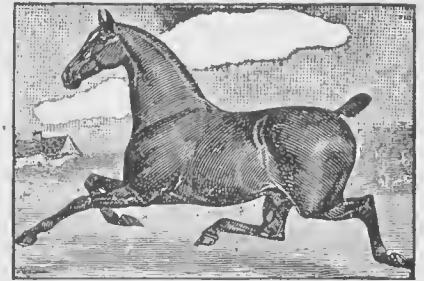
When a man shivers with cold he is not comfortable, neither is an animal. Cows and calves are particularly sensitive to cold, as also are colts and horses. The merciful man is merciful to his beast. It is not merciful to leave stock out in cold wind and storms late in the autumn, as is frequently done. It requires so little labor to put them under shelter.

The Queenslander contends Queensland, the northern division of Australia, is destined to be the great beef raising section of the Australasian group. In 1897 she possessed 6,089,000 cattle, or about half the number in the whole of Australasia. It is true that, in consequence of drought and the tick pest, the cattle number half a million less than they did two years ago, but corresponding losses have occurred in other colonies. Science will no doubt be able to discover some remedy to check this plague.

Horses and cattle on the mountain ranges in the Hawaiian Islands very seldom drink water. In fact, except during the rainy season, there are no pools for them to drink from. Nature has, however, provided a substitute in a native, recumbent, jointed grass, which is both food and drink. The natives call it manina, and stock grazing on it do not require water and will not drink it even when offered. There are thousands of cattle which never take a drink throughout their whole lives.

George Sands, the great French novelist, thus graphically describes the affection that animals form for each other: "People unacquainted with the country will not believe in this affection of the ox for his yoke-fellow. They should come and see one of the poor beasts in a corner of his stable, thin, wasted, lashing with his rest-

less tail his lean flanks, blowing uneasily and fastidiously on the provender offered to him, his eyes for ever turned towards the stable door, scratching with his foot the empty place left at his side, sniffing the yokes and bands which his companion has worn, and incessantly calling for him with piteous lowings. The ox-herd will tell you: 'There is a pair of oxen done for! his brother is dead, and this one will work no more. He ought to be fattened for killing; but we cannot get him to eat, and in a short time he will have starved himself to death.'"



HACKNEYS FOR SALE.

Several Hackney Stallions, pure bred and registered. Can also supply yearling Hackney stallions in the spring, with three crosses (unregistered).

RAWLINSON BROS.

Box 20, CALGARY, ALTA.

CANYON STOCK FARM.

Choice strain of milking SHORTHORNS. Highest type of SHROPSHIRE SHEEP—10 choice young registered Rams for sale.

S. W. PAISLEY, LACOMBE, ALTA.

HOLSTEIN BULLS FOR SALE

One yearling bull, ready for service, and one three month-old bull calf. Both out of Tempest IV., a cow that gave 101.50 lbs. of milk, containing 3.39 lbs. butter fat, in two days at Brandon Fair.

JAS. HERRIOTT, Box 7, Souris, Man.

DORSET SHEEP and JERSEY CATTLE

I have a number of choice Dorset Horned Rams and Lamb Rams; also 2 registered Bull Calves for sale at reasonable figures.

W. J. WHITLEY, Emerson, Man.

NOTICE.

Strayed on sec. 6, tp. 8, rge. 22, one bay filly, three years old, white hind feet, star on face.

One bay filly, one year old, white hind feet.

Postmaster, Dempsey, Man.

July 8, 1899.

BERKSHIRES & COTSWOLDS.

August Pigs now for sale, perfect little beauties of excellent breeding. Also 2 yearling sows, one due to farrow (a model Berk.) and a yearling Boar, extra choice. Write for descriptions and prices; so cheap it will surprise you. No culls. Stock guaranteed as represented. Also Cotswold Shearling Ram and Ram Lamb, good ones E. HYSOP, Laudazar Stock Farm, Box 492, Killarney, Man.

MAPLE CLIFF DAIRY and Stock Farm.



Ayrshire Cattle, Large English Berkshires, Improved Tamworths.

Young stock for sale at all times. Farm within 5 minutes' walk Cen. Experimentl. Farm.

R. REID & CO., HINTONBURG, ONT.

F. TORRANCE, VETERINARY SURGEON

Graduate of McGill University. Diseases of animals treated scientifically. Surgical and dental operations a specialty.

Office: 214 James St., Winnipeg. Telephone 295.

SHEEP.

Sheep Raising in Wyoming.

The Farmer has from time to time called attention to the rapidity with which sheep and small farmers have been crowding the western range country in the United States. The last ten years has seen a great change, districts which at that time had no sheep now have them by the tens of thousand. Grazing the sheep is not the only line of work followed, for great numbers are also fed for the eastern markets during the winter. L. M. Ormsby tells the following in the Omaha Bee as to how he handles his sheep:—

"We run our sheep in bands of about 3,000 each and have one man and shepherd dog to a band. With every two bands there is usually a camp-mover, whose duty is to hunt, range and water and move the camps there when the feed around the last location has been exhausted. The herder must keep his sheep on good feed all the time. With every band there goes a sheep wagon, which is a house on wheels, containing a bed, cupboard, cook stove, cooking utensils, provisions, etc. At night the herder brings the sheep in around the camp, and as plenty of bells are kept on them he is supposed to hear the disturbance should a mountain lion, coyote, or other animal get among them, and hurry out with his gun to protect the flock. This happens nearly every night, as these animals are numerous and destructive.

"After the lambing and shearing time is over, usually by the end of May, the flocks start for the summer ranges, which are generally in the mountains. Last summer we had 6,000 of our sheep in the Big Horn mountains, at an altitude of about 10,000 feet, and the rest about 100 miles away in another section. It is very beautiful up in the mountains. We were near Cloud Park, nearly 14,000 feet above the sea level, and in two hours' ride from the camp we could reach perpetual snow. It snowed every month in the summer, and ice froze every night in our camp. The streams were filled with trout, and on the mountains there were deer, elk, grouse and other game.

"The sheep have there fine feed and plenty of pure, iccold water, but it is dangerous, by reason of the snow, to keep them in the mountains after September. So we move them down into the valley, where they remain until the snow comes. Then they are taken into the bad lands for the winter. As there is no water in these bad lands, the grass cannot be fed off in the summer, and this consequently leaves a good winter range. The sheep can get snow in the winter and don't need water, while we melt the snow for cooking and drinking and for the horses. The bad lands are a remarkably rough and broken country, and this protects the sheep from the severity of the winter's storms. We stay by them in winter's blizzards just as we do in the summer, and with the thermometer sometimes at 40 degrees below zero it is no picnic.

"The winter over, the shearing season begins and is ended by the last of May or June, accordingly as it was begun before or after the lambing time. Until within the last three years the shearing was mostly done at the railroad pens, the sheep having been driven there for that purpose and then taken back to the range. Now most of the wool is sheared at private pens located all through the country for 200 miles from the railroad and freighted in to the shipping point by what we call 'string teams'—two or three wagons coupled together and hauled by from eight

to twenty horses. They average about 1,000 pounds to a horse.

"Most of the shearing is done by hand with sheep shears. The shearers generally go in gangs of from ten to twenty, one man acting as foreman and making all the contracts and attending to all the business. The men will shear on an average 100 sheep each per day. They tie the wool, put the sheep in their stalls and take the shorn ones out. I met one man who had shorn 220 sheep in a day, but the record is held by one who sheared over 300 in ten hours. This may seem a pretty big story to eastern sheep men, but it is true. There is a steam shearing plant in Caspar, with a capacity of 8,500 sheep per day. An ordinary workman can learn to use these clippers in a day or two, and while he can't shear any more sheep per day than by hand, better and nicer work is done and the sheep are not so badly cut as they often are by the hand shears. The fleeces here will average about eight pounds in weight. The leading wool buyers of Chicago, Philadelphia and Boston are all represented here. Last season I shipped about 1,000,000 pounds to one Chicago firm. There were 4,000,000 pounds shipped from Casper last year and this year it will be more."

Sheep Without Wool.

The principal kind of meat consumed by the people of Arabia, both native and foreign, is the mutton of the Somali, or blackhead sheep, and no matter by whom eaten all pronounce it the best mutton ever tasted. The sheep, as its name implies, is from Somali country on the African coast. These sheep have no wool, but short, fine hair, similar to that of the dog. The most peculiar thing about them is that they have a large lump of pure fat growing right at the root of the tail, and this fat varies in size and weight according to the condition of the sheep. A medium-sized lump of this fat weighs about four pounds. Such a sheep which weighs from 35 to 40 lbs. is sold at from four to five rupees (85 cts. to \$1.05). The skin when sun dried is exported, and large quantities of them go every year to the New York market, where they are known as "mocha skins," but like the "mocha coffee" of commerce, this is merely a term and nothing else. In 1897 these skins were imported into New York to the value of \$628,226.

The Cotswold Sheep.

In response to inquiries received upon the general type of the Cotswold breed, the following extract from Stewart's "Domestic Sheep" is published:—

"The Cotswold sheep has an interesting history. It is the oldest breed of sheep of which there is any satisfactory record. Its history goes back for at least three centuries and beyond that, while it has no written records, yet it has been known that the long wool yielded by this sheep was in high favor long before the name of the sheep which produced it was a matter of notoriety. This long pedigree explains the reason for the great natural prepotency of the ram of this breed in the production of the various crosses which have been made by the Cotswold rams.

"It is one of the hardiest of all breeds, having been reared for this long period in a poor, exposed district, and while it changes character when removed to more favorable surroundings, yet it is one of the hardiest sheep for the range. It is next largest sheep to the Lincoln. It is a good mutton sheep, and has a good fleece of rather coarse wool, valuable for heavy goods.

"The flesh is not so fine as that of the Down breeds, but is yet excellent for the butchers' use when not over 15 months old, when it fattens readily and makes twenty-five pounds to the quarter. Its old size has been somewhat reduced, to conform to the present demand for lighter carcasses. The fleece, too, is not so heavy as it used to be, when it often weighed twelve pounds or over of wool. It has been crossed with advantage with the Leicester, yielding then better mutton and a finer staple of lustrous wool, in good demand for heavy goods, and especially the coarser kinds of women's dress fabrics.

"One of the best of its crosses is with the smaller Down breeds. It has been used with much success to cross on the Merino, the lambs of this cross making fine market stock, being large and fat, and the full-grown cross-breeds making fine market mutton and a useful fleece.

"Sir J. B. Lawes, in his experiments in feeding sheep of various breeds, proved that these sheep made a more profitable return in growth for the food consumed than any other breed. Its hardiness has been proved by its average losses by death or accident being as low as 2½ per cent. under ordinary circumstances, under a system of open fielding during the winter. It has been kept mostly on a system of feeding in the open ground on turnips.

"The face of the sheep is mostly white, sometimes with grayish mottled marking; the cross with the Downs gives a black face with a less pronounced Roman nose, which is, however, less prominent than in the Lincoln and Leicester. The forehead has a conspicuous tuft of wool. The belly is generally covered with wool, as is also the scrotum. For crossing on the smaller breeds, especially our common natives, it is not excelled in point of hardiness of the progeny, the increased size and weight and value of the fleeces."

An old shepherd says bran, oats and good hay is the best feed you can give your breeding ram.

In an experiment in Cumberland, Eng., 30 lambs, half-breed Cheviot and Border Leicester, were divided into two lots. Both were turned into yellow turnips and given all the hay they would eat, but one lot received in addition one-half pound linseed oil cake, and one-fourth pound of oats a day for each lamb. They were fed in this way eight weeks. At the end of that time it was found that the cake and oat-fed sheep had eaten \$10.60 worth of food, and the others \$3.20, making the cost of cake and oats \$7.40. But they found that the grain-fed lambs made \$15.12 worth more of mutton in the time, showing a profit of \$7.72 above cost of extra feed given. This scores one in favor of liberal feeding of rich foods.

SOMERVILLE & CO.,

STEAM MARBLE AND GRANITE WORKS

BRANDON,

Dealers in Marble and Manitoba Granite

MONUMENTS, HEADSTONES, MANTELPIECES, GEMETERY FENCING, TABLETS, ETC.

Rosser Ave., Brandon, Man.



Represented by W. Somerville, W. C. Stewart, A. W. Thomson, E. Patterson.

When writing mention this paper.

SWINE.

To Breeders.

The following pointers from an address given by a Berkshire breeder at a West Virginia Institute meeting are worth remembering:—

When you sell a pig, don't make the purchaser write several letters before you send the pedigree.

Remember that satisfied customers are the rays of bright light which make and illuminate the reputation. Dissatisfied customers are the black clouds which hover over our reputation, and one black cloud will darken your entire reputation, no matter how long it has been established.

Never club or bang your stock around; remember that if they have not the sense you wish them to have that intelligence is never communicated through a club.

See that your hogs always have fresh, clean water.

Never allow the premiums won by the sire and dam to dazzle your eyes when looking at the pig. Size up the pig first, then his pedigree, then the reputation of the ancestry last.

If you can't keep stock comfortably, don't keep them at all; warmth and feed develop points; the ancestry can only originate them.

If you are a farmer, always use a thoroughbred boar. Remember, you don't know it all, and always listen to good advice.

Some men are flighty or variable in the treatment of their pigs. When they note that the pigs are running down, they rush off to the mill and buy a little mill feed, or else have a grist of corn ground to make mush or raw oatmeal slop. Well, for a time the pigs improve at a good rate, when the farmer concludes they are costing him too much, or else the extra corn is too much trouble, and the pigs are again neglected till they show their neglect so much that the owner feels that they must have better care or he will lose them, and again the feast is on for a time. These men sometimes complain of "bad luck."

A Feeding Device for Motherless Pigs.

Many a man loses a litter of young pigs owing to some accident to the mother and it has always been a question if some feeding device could not be invented by which the young pigs could not get a supply of milk and their lives be saved. Lambs are raised by hand, why not pigs? On page 509 in the July 20th issue, a home-made contrivance is described whereby a farmer saved his young pigs. In an American exchange recently an account is given of how Dr. Jordan, the director of the New York Experiment Station, invented a contrivance by means of which young pigs can dispense with the services of a mother immediately after birth. A registered Duroc sow gave birth to a litter of pigs at the station one day recently. The mother was taken violently ill and was unable to suckle her offspring after the first day. A small tank was made which had a sufficient number of outlets at the bottom, and six inches above the floor, to allow one to each pig. A small tube of galvanized iron, covered with cork, was inserted in each of the outlets. An ordinary rubber nursing nipple was attached. When the well-filled nurse is placed in the pen the pigs greet it with squeals of delight, and appear to have the same affection for it they would have for a more animated mother.

Feeding Pigs.

The British swine breeders recognize more in the importance of feeding pigs for the best quality of bacon and hams than in the breed, and in Manitoba and the west we should use chopped feed and more grass and produce better meat than the big fat corn fed hogs. We can gain some experience from the Irish farmers and bacon curers who produce the high priced bacon, pork and hams in the English markets. A celebrated bacon factory at Limerick gives in the Farmers' Gazette, Dublin, the following notes on the feeding of pigs:—

Pigs should be well fed, but not over fed. A good bacon pig of 12 stone ought to be produced in seven months from its birth. It should not be crammed, neither should it be half starved, but fed steadily and regularly. Pigs fed steadily and regularly will give the most satisfactory results to the feeder when weighed in the factories. A hog which has been half starved at any period of his life, even though well fed afterwards, will not do so well. Feed three times a day at fixed hours; never leave food in the troughs after the pigs have finished. The flesh of hogs is soft and flabby if fed on brewery or distillery stuff, or on turnips or mangels, and in comparison to their size their weight in the scale is miserable. They may deceive (we doubt it) the buyer who buys by "guess," but they will not deceive the scale-weight.

The best classes of food for pig feeding are: Potatoes (cooked), milk, barley meal, oatmeal, crushed oats, pollard, bran, ground wheat, rye meal, Indian corn. The latter should only be used sparingly, and in conjunction with other foods, such as pollard, bran or milk; and should always be ground as fine as the mill can make it, and thoroughly cooked, otherwise the Indian corn passes through the animal undigested, and to the loss of the feeder. Barley meal need not necessarily be cooked—scalding it will do. It is certainly the best food, except perhaps potatoes, for producing pork. Never sell barley of moderate quality to buy Indian meal. Grind your barley, feed it to your hogs, and their weight when dead will astonish you.

The secret of making money by pigs is not to rush into them, nor out of them. Never keep too many; never keep too few. The fault in the past has been that feeders ran in to buy when hogs were dear, and stayed at home when they were cheap. You will not get well-shaped pigs from a badly-shaped boar; neither will you get thrifty pigs from an unthrifty sow. If you do not keep your pigs clean and dry they will not pay you. A pig, any more than a human being, will not thrive on a foul, damp bed. The best thriving pigs we have ever seen were those produced from an ordinary well-shaped country sow and a thoroughbred York boar. The services of this latter class of animal can easily be had nowadays. A long-legged, ungainly boar will get a leggy, flat-ribbed, cat-hampered, herring-gutted, miserable class of pig, which will pay nobody, and deceive nobody as to their quality, except, perhaps, the man who feeds them. The tall, leggy hog was ignorantly thought to deceive the buyer who purchases by "guess," but does not deceive the factory weighmaster.

No matter how low prices may be, if it does not pay to feed pigs, it certainly does not pay to starve them. The way to have cheap stores is to breed them yourself. If you cannot afford to keep a breeding sow yourself, get two or three of your neighbors to join you, and divide the expense and the progeny. A good sow is easily fed, and is the best savings' bank you can have. The day you buy is the day you sell. If you pay too much for the

store you will want (but will not get) too much for the bacon pig. Where a proper sow is kept, young pigs can be produced for 1s. a week of their age—that is to say—eight weeks, 8s.; 10s., and so on, up to twelve weeks. Why should the feeder pay practically double this for them? One great secret of pig-raising is—When the pigs are high in price don't lose your head and throw your money away; when pigs are low don't lose your head and throw your pigs away.

Exercise for the dams will ensure life and vigor to the litter when born.

Mature sows and young, strong, vigorous sires make the spring litters strong.

About the largest hog ever raised was lately slaughtered at Norwich, Eng. It was a Tamworth boar. This huge swine was 2 years old, weighing alive 1,607 lbs. and dressing 1,330 lbs., being 8 feet from the tip of its nose to end of its tail. It measured 2½ feet across the loin, 2½ feet across the hams, and 5½ feet in girth.

Damp bedding is one of the very worst risks a young pig can encounter. The dampness chills it and the next time it gets out in the wind it shivers, with a tolerable certainty that an attack of rheumatism is not far off. Somebody not far off has been making money year after year by fattening just such another litter. But this lot gets stiff in the joints and falls off its feed and after a lot of waiting the trouble is evidently past cure. So instead of making money out of his fine litter their poor owner has had luck with them, just as he has with about everything else he tries.

The habit which sows have of preparing comfortable beds of straw or other litter for themselves, just prior to farrowing, has often been commented on. The practice is thought to be a relic of a device resorted to by the wild ancestors of the pig, in order to shield their young from the attacks of their many enemies in the wild woods and forests of their pre-domesticated days. Even at the present day it is said that in the Indian jungles heaps of grasses and branches are met with, which are nothing else than the remains of the nests or lairs of wild pigs, in the recesses of which young sucklings are sometimes to be met with.

UNEQUALLED RECORD!!



After years of use by thousands of the most progressive farmers of Canada, the yearly sales of the

CHATHAM FANNING MILL

grow larger with each succeeding season. This, with the fact that all other MILLS sold in Ontario do not equal it, is certainly the most convincing proof of its superiority. No farmer should be without a good Fanning Mill. The best is not too good for you. Write for particulars and price.

THE M. CAMPBELL FANNING MILL CO., LTD., CHATHAM, ONT.

When writing advertisers, kindly mention The Nor'-West Farmer.



Answers to Questions.

By an Experienced Veterinarian.

As it is desired to make this column as interesting and valuable as possible to subscribers advice is given in it free in answer to questions on veterinary matters. Enquiries must in all cases be accompanied by the name and address of the subscriber, but the name will not be published if so desired. Free answers are only given in our columns. Persons requiring answers sent them privately by mail must enclose a fee of \$1.50. All enquiries must be plainly written, and symptoms clearly but briefly set forth.

Lameness.

Adam Whitford, Virden, Man.: "Four weeks ago a mare of mine went lame on front foot; when noticed at first was not swollen much, but I worked her for a few days and it then became swollen and hot; I put on a liniment and it blistered it; then tried cold water and bandaged for a time. This seemed to help it. Since then have been using vinegar instead of water and gave her a rest for a week, but the swelling is not gone altogether yet. Please prescribe."

Answer.—If the lameness has disappeared and you wish to remove the swelling, exercise the mare every day. On returning to the stable pick up that foot and massage the swelling by pressing and kneading with the fingers. Then wet the swelling with the following liniment and apply a woollen bandage: Iodine, one ounce; iodide of potassium, half an ounce; glycerine, one quarter ounce; methyl alcohol, eight ounces. Do not rub this in, but merely wet the skin with it and if several applications produce soreness of the skin, wait a few days and then continue as before.

Blackleg or ?

A. Hanson, Estevan, Assa.: "Please give us some information on the following subject:—I had one calf and two steers die within two weeks and within 24 hours after taking sick. The calf was one month old, one steer two years old and the other three years old. The steers were slightly bloated and the oldest swelled considerably after death. They seemed to be full of blood and water when opened and the fat on the younger steer was black. Saw description for symptoms of blackleg in Sept. 20th issue. They were not lame, neither were there any cracking sound under the skin. I could not see anything in the calf; he was not swollen at all. Our cattle are all fat; have had good pasture all summer; they got water from the sloughs until August, when we started to water them from the well. We watered from well over a month before the first one died."

Answer.—Quite possibly the two steers died of black-leg, as the disease sometimes attacks an animal without producing a swelling upon the body or quarters. In such cases the germs are developing inside the body and the disease is more rapidly fatal than usual. The blackness of the fat and the presence of blood and water in the abdominal cavity are both conditions found in black-leg. As regards the calf it is more than doubtful if black-leg had anything to do with its death. Young calves are naturally resistant to the disease; do not take it readily even when inoculated, and are very seldom affected while still taking milk. As they

grow older this natural immunity gradually disappears and by the time they are weaned they will contract it, though not as readily as animals of one or two years of age. In attempting to protect your other cattle from the disease it is well to remember that the contagion is in the earth of the pastures, and if you are now stabling your cattle you need take no precaution until next season. If the cattle are still running out they should be protected by inoculating them with Pasteur's black-leg vaccine. The operation is simple and free from danger, but calls for professional skill. The disease being most dangerous to cattle up to the age of four years, it is the young stock which requires looking after.

Timely Notes.

Many farmers have already commenced to stable cows over night. This is well. Those who have not, should at once fix up stables; see that ties are all ready, so that when the first cold storm comes every animal about the farm can be put under cover.

Get your potatoes out of the ground. This fine weather will not last much longer. It is always a disagreeable task to gather potatoes in the cold and wet.

Gather all your machinery together under cover before the snow flies. Rain and snow during the winter injure them more than a season's work.

Turnips and mangels gathered into the yard and covered with straw will keep for another month or six weeks; and when fed regularly are much better for stock than when left in fields for cattle to run upon and eat when frozen.

Salting Hides.

An Australian exchange thus describes a method of curing hides thought very suitable for that country:—

Avoid cutting the hides, and do not leave flesh on; this affects the sale to a greater extent than is generally supposed. When trimming, cut off the knee and the hind shanks from the hocks, also the head, ears, and face pieces, leaving the cheeks only. Lay the hides flat, one on top of the other, butt to butt, on a clean floor with a little slope, to allow the brine to drain out.

Salting—As laid down they should receive from ten to twelve pounds of salt, and be left in salt fully eight days before being taken up; when taken up, shake out the surplus salt and sweep the hides before rolling up for market. The salting varies according to size and thickness of the hide, and should be spread evenly over, the butt part receiving the most. A great loss is often occasioned by the want of a few extra pounds of salt (a trifling cost in itself), for the hides become slippery or loose-haired, causing them to be sold as faulty, and incurring a loss of ½d. to 1d. per lb. in price. Cleanliness is the only thing required to give the hides the kind of flesh desirable.

Folding—When folding, the flesh side to be inside; throw the head towards the tail, the fold starting from the wither, the sides to be thrown in, meeting at the centre of the hide, and then rolled tightly from the head and securely tied with two pieces of strong lashing at each end, attaching to same a piece of leather or tin with owner's initials marked on in ink, and an address label.

We find plenty of people who don't average well; they know too much for one man, and not quite enough for two.

DR. WARNOCK'S
ULCERKURE THE MODERN HEALING
WONDER FOR

BARB-WIRE CUTS.

Rope Burns, Sore Shoulders, Old and Stubborn Sores, Ringworm, Mange, Bites of Animals or Insects, &c.

Ulcerkure is warranted, and all dealers are authorized to refund the price if it fails to cure.

Wm Stephens, Indian Head, says:—"After two years' experience with Ulcerkure in healing flesh wounds, I am convinced it is the best healing medicine ever discovered."

There are hundreds who say the same. Send 3c. to pay postage on free sample.

WESTERN VETERINARY COMPANY, Box 478, WINNIPEG.

Horse Owners Should Use
GOMBAULT'S

Caustic Balsam

The Great French Veterinary Remedy.

A SAFE, SPEEDY AND
POSITIVE CURE.



Prepared exclusively by J. E. Gombault ex-Veterinary Surgeon to the French Government Stud

SUPERSEDES ALL CAUTERY OR FIRING

Impossible to produce any scar or Blemish. The safest best Blister ever used. Takes the place of all liniments for mild or severe action. Removes all Bunches or Blemishes from Horses or Cattle.

As a HUMAN REMEDY for Rheumatism, Sprains, Sore Throat, Etc., it is invaluable.

WE GUARANTEE that one tablespoonful of CAUSTIC BALSAM will produce more actual results than a whole bottle of any liniment or spavin cure mixture ever made.

Every bottle of Caustic Balsam sold is Warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars, testimonials, etc. Address THE LAWRENCE-WILLIAMS CO., Cleveland, Ohio

BRANDON PUMP WORKS.



NOW
IS THE TIME

to get your Pump repaired before the cold weather. Why wait till everything is covered with snow and ice, when you can get it done so much cheaper and better now.

We keep a supply of all kinds of Pump repairs; also a full stock of both Wood and Iron Pumps.

Our prices are the lowest. Satisfaction guaranteed.

Agent for Myers' Brass lined Cylinder Pumps.

Address—H. CATER, BRANDON, MAN.

PEEL'S HORSE AND CATTLE FOOD.

The great blood purifier. Will put your stock in good condition for very little money. Every package sold on a positive guarantee. Write for pamphlet and testimonials.

R. H. PEEL - WINNIPEG.

When writing advertisers, mention The Farmer.

Manitoba and N. W. T.**AN ACROSTIC.**

Manitoba, sky encircled, like the spreading main,
 And, like it, now smooth, now rolling,
 green and gold with grain;
 Now the train of trade and travel whistles
 loud and clear
 In the trail where once the Indian chased
 the bounding deer,
 Thronging to the hardy toilers from be-
 yond the sea,
 On thy broad and fertile prairies plant
 their homesteads free
 Big and buoyant Prairie Province, on thy
 fruitful soil,
 All around shall rise and flourish homes
 of hopeful toil.
 All abroad shall spring up o'er the cities
 fair to view,
 Nurtured where once grazed the wander-
 ing moose and cariboo.
 Droves of horse and herds of cattle graze
 beside the trains.
 Now, where once the elk and bison hur-
 ried o'er the plains.
 Winter's cold is soon forgotten where
 hurrying spring
 Tells how soon from summer sunshine
 harvesters will sing.

The above acrostic is the handiwork of the Rev. W. H. Porter, M.A., of Brantford, Ont., who with his wife was on a trip to the Coast this summer. It was done while the train was speeding through the land he so succinctly portrays.

Fair maiden (a summer boarder)—How savagely that cow looks at me!

Farmer—It's your red parasol, mum.

Fair maiden—Dear me! I knew it was a little out of fashion, but I didn't suppose a country cow would notice it.

Buenos Ayres easily leads as a market for good Shorthorns. At a sale held there on August 10th, nine Shorthorn bulls sold at an average price of over \$2,000. One bred by the Prince of Wales made \$3,565. A Hereford sold at the same time made \$916.

The Immigration Department at Ottawa has issued a very neat collection of views accompanied by suitable letterpress illustrative of the many and varied attractions offered by the country west of Winnipeg. The illustrations are all from photographs and represent the various stages of pioneering in farming sections of the country onward till the big barns and threshing engines become a familiar feature. Ranching scenes, mining and magnificent mountain scenery are all given, while by way of variety a couple of Winnipeg's public buildings and some big elevators are given a place. The get-up of this production is excellent and the description of the country, though necessarily concise, is well and truthfully done.

From the division of Forestry of the U.S. Department of Agriculture we have received Part 1 of a Primer of Forestry, by Gifford Pinchot. Within a compass of only 88 pages of letterpress the writer contrives to give an amount of information at once scientific and practical that is quite surprising. Besides the descriptive matter there are many full-page plates and smaller illustrations of the various forms of forest growth and development. British India and Switzerland supply illustrations, but, of course, the great body of these illustrations refer to the forest life of the different regions of the States themselves. This little volume is a model in its way and well worthy of careful perusal by every one interested in the subject of which it treats.

WORK
DONE
WITH

THOROLD CEMENT

SPEAKS
FOR
ITSELF.

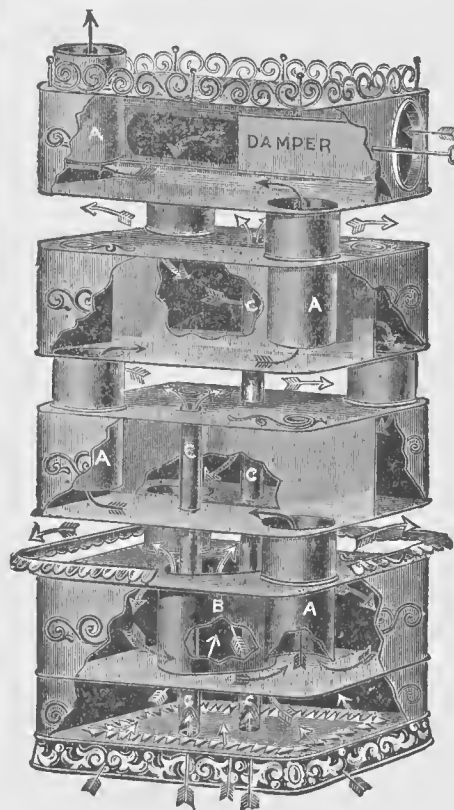


T. F. PATTERSON'S CEMENT CONCRETE BLOCK, BIRTLE, MAN.
 in course of construction, size 52½x70x44 ft. high, built with Thorold Cement.

THE basement is built of stone and the three stories above are built of cement concrete. The wall of the first storey is 13 feet high and one foot thick; that of the second storey is 10½ feet high and 10 inches thick, while the third storey wall is 10½ feet high and 8 inches thick. The walls are built of Thorold Cement and were constructed under the supervision of our Manitoba representative, N. B. Hagar. In his many years experience in concrete work, Mr. Hagar says, he never built a concrete wall on a stone foundation before, as he always starts with cement concrete foundations. In this case Mr. Patterson not only got all his stone out of the cellar to build his walls with, but had let the contract for building the foundation before he knew of the value of cement concrete.

FOR FREE PAMPHLET WITH FULL PARTICULARS, ADDRESS—

ESTATE OF JOHN BATTLE, Thorold, Ont.

**THE WINNIPEG HEATER**

YOU WILL observe, by glancing at the cut, is so constructed that the smoke and fire enter the top section of the heater; it then travels zigzag down through the different sections to the bottom and then up the opposite side in a similar manner.

From this long fire travel over a vast amount of surface it can easily be understood that great radiation results. Each section of the Winnipeg Heater is so constructed that the products of combustion can only escape through pipes opening near bottom of sections as a result the top portion of each section is heat retaining—that is the heat cannot escape to the chimney, but must radiate through the top and side surfaces of the sections.

It will also be observed that the cold air is drawn off the floor, passes up through the Heater and distributed nicely warmed. In this way an active circulation is created throughout the room and the air is heated at the floor as well as at the ceiling, resulting in an entire absence of headaches or cold feet to the occupants of the room.

You must not lose sight of the fact that all this heat is being secured without burning any additional fuel, and that the Winnipeg Heater simply extracts and distributes heat that would otherwise pass out of the chimney and be wasted. Our customers tell us they are heating extra space with a smaller consumption of fuel, that the heater regulates the fire and causes perfect combustion.

From actual results we are positive that the Winnipeg Heater under ordinary circumstances will double the heating capacity of any coal or wood stove, and when you take into consideration that this may be accomplished without any extra fuel, we are sure that you cannot wisely delay adopting it in your home.

Gentlemen—"The Winnipeg Heater you sold me three years ago is giving good satisfaction, saves about one-third the fuel, and gives the same proportion of extra heat; DOES NOT SMOKE OR CLOG; can safely recommend it as being the best heater in use here."

R. LECKIE,

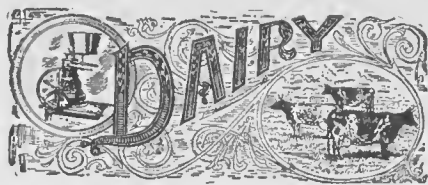
Dealer in Wall Paper, &c., Main St., Winnipeg.

Western Branch: R. DOUGLAS,

OFFICE: 463 MAIN ST., WINNIPEG.

THE METAL SHINGLE AND SIDING CO., LIMITED, PRESTON, ONTARIO.

Manufacturers of METAL CEILINGS, SIDING, SHINGLES, Etc.



Feed and Management of Dairy Cows.

(Continued.)

By J. H. Grisdale, B. Agr., Agriculturist of the Dominion Experimental Farms. Read at the Annual Convention of the Cheese and Butter Association of Eastern Ontario.

4. There is another important factor to be considered besides the food value in purchasing food stuffs and that is their manurial value after they have served the milk producing end. A great many experiments have been conducted along the line of determining what rations give the best results. A short time ago Storrs Experiment Station conducted a series of experiments among some of the best dairy herds in the Eastern States, their aim being to determine the best ration between the nitrogenous and the carbonaceous parts of the ration. In nearly every case it was found that adding nitrogenous matter to the ration increased the flow of milk sufficiently to make a profit on the increased expenditure. In Iowa we are at present conducting some feeding experiments with dairy cattle, and, though not completed, the same results are indicated. Another factor in milk production is, however, attracting much attention at that station, and that is the apparently wonderful effect of variety. Some of our cheapest rations are giving results almost equal to those richest in protein. The same fact is being demonstrated in Wisconsin, and is, I think, bound to receive more and more attention in future. Of course I do not mean by variety changing kind of feed each meal. Cows giving large quantities of milk require rations rich in protein. As the flow decreases the amount of protein may be decreased, and the whole dry matter, too, if it comes to that.

Palatability is a most important consideration in feeding dairy cattle, for of a palatable food a much larger amount will be consumed. Then let variety, palatability and protein be your watchwords.

5. Many farmers turn their cattle on pasture in May and feed them nothing extra until they again enter the stables. If a drouth comes they think luck is against them, and are resigned to lose \$10 or \$15 per cow, while this loss might be easily avoided by protecting the cattle from the heat and feeding them some green fodder. Even should it not pay while feeding—which it will, however—the keeping the flow of milk up, will, in the end, much more than return the outlay; and I might say right here that the feeding of grain in summer, while not always profitable, is very often of benefit in keeping up the flow of milk not only that year but the next also. This is especially marked in young stock. At the experimental farm in Iowa the cattle are housed and fed during the hot fly period and a good profit made. I would strongly urge the protection of the animals from the extreme summer heat, even should no food be available; better protect them during the day and let them eat at night than expose such sensitive, nervous animals as good milch cows to the heat and irritation of flies.

6. Once the ration is settled the question arises, how shall it be fed? At the Ontario Agricultural College it is the practice to

make a sort of hash, the great aim being succulence. This is an excellent method, but is not always the best, and involves a great deal of work. Many cattle when fed a mixture like this spend the time mousing the food over, picking out the grain and sometimes even sorting that, and they never seem satisfied. A good way, and one which seems to please the cattle better than any other, is to give the concentrates first and then the roughage to eat at leisure. I have found this to work well, and many experiment stations are feeding in the same way. When labor is very cheap and feed dear it will pay to cut the hay, otherwise not. A little cut hay or chaff mixed with the chop or meal will prevent too rapid eating and thus aid digestion. As to the number of times to feed it is largely a matter of custom, but once the animals are accustomed to receiving certain feed at a certain hour it is bad to feed any later or any other feed as they become uneasy, and the effect is always too much in evidence when the milk pail comes around. Salt should also be given daily, about $\frac{1}{2}$ to 1 oz. per day being sufficient.

7. Water should be given after roughage. It is best to water inside, as then each animal is likely to get all she needs and is not rushed. A large yield of milk needs a large supply of water. A most successful dairyman and State Dairy Commissioner for Iowa, P. B. Norton, waters his cows by letting the water into the feed troughs; this is done a short time before feeding and when the majority of the cows are through drinking the water is shut off leaving a gallon or so of water in the trough. Into this the ensilage and grain are dumped. He claims excellent results from this system, and I know that he is one of the most progressive dairymen in the State. His is a system of rushing every animal for all she is worth, and that is the system that pays where dairy produce is the sole object. If pure-bred stock are kept, of course other considerations enter in with which I may not deal.

8. Warmth is most essential to dairy cattle. Exposure is sure to affect the flow most injuriously. In Indiana an experiment was conducted recently, where it was shown that the loss from one cow exposed to the weather forty-eight days was \$4.26. But warmth must not be secured at the expense of a plentiful supply of good pure air. Good ventilation is

most necessary, and if we are to stamp out tuberculosis from our dairy herds good ventilation will be the chief factor in its eradication. Take, for instance, our ranch cattle, tuberculosis affections are almost unknown, and to my thinking for no other reason than that they have all the good pure air they can breathe. To think of shutting up cattle in a stable with one or no outlet for foul air or inlet for fresh, save a stray cranny, is nothing short of folly and cruelty to animals, and can never be followed by anything but failure.

Where little attention is paid to ventilation there is usually as little paid to the offensive odors arising from the manure, and these injuriously affect the cow. The care of the manure is by no means the least important of the many problems which confront the dairy farmer. Many farmers seem to consider that a good part of it may be well preserved on the hams of their cows. This is one way of keeping it, but it is a very expensive way. To avoid this the animals must be well bedded, for if good results are to be hoped for, comfort and kindness are above all things necessary. A good plan is to have a covered manure yard into which the manure from the horse barn is also carted and the two mixed, as much straw being used as possible. Another purpose which this manure shed may serve is as a yard for the cattle. Exercise is essential if health is to be maintained and the greatest profit reaped, yet to turn cattle out in cold winter weather is little short of throwing profit to the winds, and profits are what we are all after. Of course, it is possible to accustom cattle to a short period of exposure, so that they will not be very seriously affected by it, but the less the better. The plan I have suggested is one which I have seen tried in one or two cases, and, so far as I could discover, gave excellent results, while Prof. Roberts has conducted an experiment which shows conclusively that the plan is a good one.

Now much that I have said is not new to most of you, probably to none of you, but to some who are starting, or to others who may get into a rut, I would particularly appeal to do what you can to improve your methods. Much may be done by the stations, but without the hearty co-operation of the farmer all is in vain. Every step forward any one of us can make is a gain for the glorious calling of ours—a

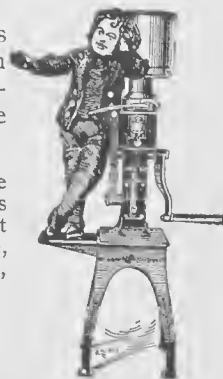
THE DE LAVAL ALPHA SEPARATOR

The superiority of the "Alpha" De Laval Separators is testified to in many ways, but perhaps in none better than by the methods used by some of our competitors in attempts to force the cheaper and inferior makes on to the people. See what one would-be buyer has to say:

"We had a De Laval "Baby" No. 2 for a trial, and desire to certify that we find it the best in every respect, that it gives more cream, and is much easier turned and cleaned, so that if it was not that we were compelled to take another machine, we would certainly be willing to pay the difference in price, and have none other but the De Laval.

"I am, yours truly, TZALA RICHOT."

St. Norbert, Man., June 23, 1899.



The Canadian Dairy Supply Company.

236 KING STREET, WINNIPEG.

calling which makes manly, intelligent and upright men, and the only calling which develops every side of man's nature.

To the manufacturing dairyman, I have in conclusion, a few words to say. Upon the product of the dairy farm you are dependent for your prosperity, and the greater the amount of raw material you can have produced the greater your profit. For who ever knew a factory closing because there was too much milk?

Now, you have a number of inspectors or instructors, whose duty it is to go around and visit the factories and give individual instruction. Why not extend the system somewhat, and have a few instructors on the care and feeding of dairy cattle, who, in any section where there is poor milk being supplied, would be available to give individual assistance to the farmer, to give him such instructions as would enable him to produce a better quality and a greater quantity of milk from a given outlay?

That this is a practicable plan, I am certain, and by this means the very men who need the help most, men who do not attend our institutes, men who read little and think less, men who have got into a rut axle deep, would be reached, and who knows how many of them would be roused and made into progressive farmers, such as go to make up our noble country.

Another plan I would suggest and which I am surprised has not been tried previously, although so far as I can find out it has not, is the issuing of a monthly or weekly slip, each issue to contain a few suggestions, hints on feeding, management, milking, care of milk, and kindred topics. Ours is a business; let us put business principles into it and push it. If a business man goes into manufacturing he does not wait until the government rustles around and spurs up his supplies of raw material, but he steps in himself and takes a hand. Reach the man in the rut, the others will look after themselves, although constant watchfulness is necessary lest the best of us find himself in a similar fix.

DISCUSSION.

Q. What do you think of exercise for cows? Do you approve of the method advocated by some in Germany?

A. The summary of the experiments there are to the effect that the working of cattle will decrease the yield of fat in milk. The exercise in Germany is genuine work, such as hauling a plow.

Q. If the cow is making a lot of milk each day, do you not think she is having lots of exercise? What do you think about a cow travelling around in the snow?

A. Having the cows come out in the winter and take moderate exercise is, I believe, conducive of health, and unless your animals are in good condition of health you cannot expect a large flow of milk or a high range of butter fat, or anything else. Well, a man needs exercise as well as rest and so also does a cow. It does not do for a man to exercise violently in the summer and then lay up all winter and do nothing. And I am of opinion that a cow requires exercise to a reasonable degree in winter as well as any other animal.

Q. Do you think it is necessary to turn out cows every day in winter for exercise in order that they may be in a healthy condition and so be able to give large quantities of milk?

A. No; not every day. There may be days when it would not be wise to turn them out. But frequent exercise, I believe, is essential to health.

Q. That is different to what we have been telling the people for some years. We have been urging them to build better stables, properly warmed and ventilated, to feed the cows well, and not to let them out for exercise in the winter. Now, let us get at the heart of this thing. If you

Superior Commercial Cream.

It may not be generally known that the very highest product of a Separator is "Commercial Cream." Such, however, is the case, and in many sections of this country the quality and value of a Separator is gauged entirely by its ability to not only skim clean, but at the same time to produce a perfectly smooth, free-from-froth cream of the proper consistency. In the past, all Separators signally failed in these essentials, and it was not until the introduction of

THE SHARPLES TUBULAR SEPARATOR

that complete success was attained. As a consequence, the Tubular sprung immediately into popular favor, and is now being used exclusively by the largest shippers of "Commercial Cream" in the country. It produces with perfect regularity, as the gentleman mentions below, a smooth, "velvety" cream, of proper commercial consistency, and absolutely free from bitter froth and other deleterious properties.



Office of NORTHBROOK CREAMERY,
Northbrook, Pa., Sept. 15, 1899.

P. M. SHARPLES Esq.,
West Chester, Pa.

Dear Sir,—We believe you will travel a long distance to find another creamery equal to the Northbrook Creamery in its general arrangement, modern machinery, and satisfactory system of operation. Everything in this creamery is the best that money can buy. Your No. 25 Tubular Separator has proven fully capable of performing the work you claim for it, both in quantity and quality. In addition to clean skimming, it produces what we particularly require—a "velvety" smooth cream. It makes little noise, is easily cleaned, and continues to grow in favor with us the longer we use it.

Respectfully,

NORTHBROOK CREAMERY.

A. F. Seehold, for Wm. Kelly, Prop.

This is but one among many others who have spoken in like strong terms of the superiority of the Tubular. In the butter-making creamery it is simply unapproachable, being a very clean skimmer, economical of steam, oil, etc., and requiring no repairs. It is most easily managed and run, easiest of all to clean, and, above all, it is absolutely safe and burst-proof. Meditate, then.

THE SHARPLES CO.,

Canal and Washington Streets,
CHICAGO III.

{ Send for
Catalogue
No. 73. }

P. M. SHARPLES,

West Chester,
Pa., U.S.A.

INCREASE YOUR INCOME

by investing in one of our Cream Separators. For durability, speed, ease of turning and good work they stand foremost among all the different kinds of Cream Separators on the market.

Rapid City, Man., Sept. 7, 1899.

Dear Sirs,—

The separator is very satisfactory, even more than we expected. We were making about \$30.00 a month with the ice and deep-setting cans with 14 cows. Now we have 15 cows and the separator and are making about \$60.00 a month. It is very easy turned and very easy kept clean.

I am,

Yours truly,

J. B. HENRY.

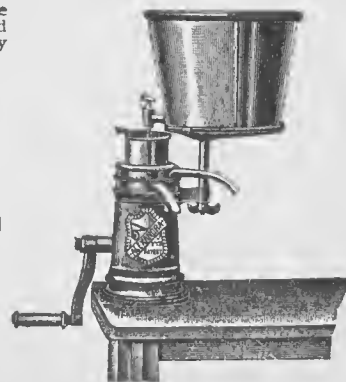
R. A. LISTER & Co., Ltd.

Manufacturers of Dairy Machinery.
Dealers in Dairy Supplies and Produce.

232 King St., Winnipeg.

CORRESPONDENCE SOLICITED.

Agents wanted in all Districts where we are not already represented.



agree with Mr. Grisdale, that it is well to let your cows out in winter for exercise, say so; and if you don't believe that, say so, too. If I have a stable properly built and ventilated I would not turn an animal out from November to May. That is my personal view.

A. Prof. Roberts, of the Cornell University, has been conducting experiments with this end in view, and he has found that giving them sufficient exercise for health has increased the yield of milk about eight per cent.

Q. How does he exercise the cows?

A. He built a small stable, with just barely room to feed and milk them. After the cattle are fed they are allowed to go out in the yard, which is a large covered affair, and which contains a lot of litter and roughage. They are not rushed around by a dog, but are allowed to move around or lie down at their pleasure. It has been found conducive to milk secretion. This place is well boarded and well lighted. The cows are put hack into the small stables for the night. The place for exercise is practically a large covered shed, with windows in it.

D. M. Macpherson: At Cornell, according to Mr. Grisdale, Prof. Roberts has a small stable for his cows, and that means a lack of ventilation, which would have a deteriorating effect upon the cattle kept therein. A cow should have plenty of pure air. I have had eight years' experience, keeping from 70 to 80 cows and steers, and find that it is good for them to be tied in for six or seven months. They never come out from the roth of November until the grass starts in the spring. My cattle do well under that treatment. They have a bright eye, sleek hair, and are never sick. I have a wooden floor in my stable.

Prof. Dean: I think that perhaps a happy medium would give the best results. I am afraid that if you advocate "exercise" it might be carried to an extreme by many. The average farmer seems to think that exercise is turning out cattle for the whole day. Surely that kind of exercise can have no advantage on the health of a cow. I think that on a mild, sunshiny day during the winter the cows might be left out with advantage.

Q. Will exercising the cow by letting her out into the open air have any effect upon the progeny?

A. I think the effect would be to make the progeny stronger. I would not let the animals be exposed to bad weather, but would let them take a little exercise or outing every fine day.

Prof. Hart: The question of watering stock in the stable is an important one. If the water is chilled when the cow drinks it we will not get as much milk from her as if the chill was off the water. If the cattle take this ice-cold water they will be chilled, and will not respond as fully in giving milk, for the cow has to give some of her energy in warming up the water she has taken. It does not pay to use good food to warm water. I visited a stable the other day and saw where the water was put in a large covered tank, and kept at about ten or twelve degrees higher temperature than that of the other water brought directly in. This meant a good deal to the cows. They were not so likely to get chilled, and the plan is a cheap and practical one. The tank being covered the water was not affected by stable odors.

Note.—The plan followed by some of our more progressive stockmen in the west of having a water tank above the stable, but closed in from the air in the upper story and open to the stable below, is a good one. The warmth of the stable takes the chill off the water and also prevents any possibility of it freezing.—Ed.

The Farm Separator.

An English exchange says: Farmers are beginning to learn the value of the cream separator for separating the cream while the milk is warm and fresh from the cows, and the relish with which the calves will drink the warm skim milk, also the labor they save and the money they make. They should be careful when making a choice of separators, and get one that is adapted for family use—one that can be run by the children ten or twelve years old, or by the women, as the men cannot, without much inconvenience, be at the house at milking time at all seasons. Also, have nothing to do with a separator that will not skim more than 300 lbs. of milk per hour, as there is too much time wasted with the small separators.

There are four points that the farmer should consider when wanting to buy a cream separator: (1) Its skimming capacity. (2) Easy running. (3) Time required to put it together, take it apart, and wash it. (4) Its price. The old gravity method has served its day, and must give way to the introduction of the cream separator and separation of the milk by centrifugal force.

Michigan College and Grade Cows.

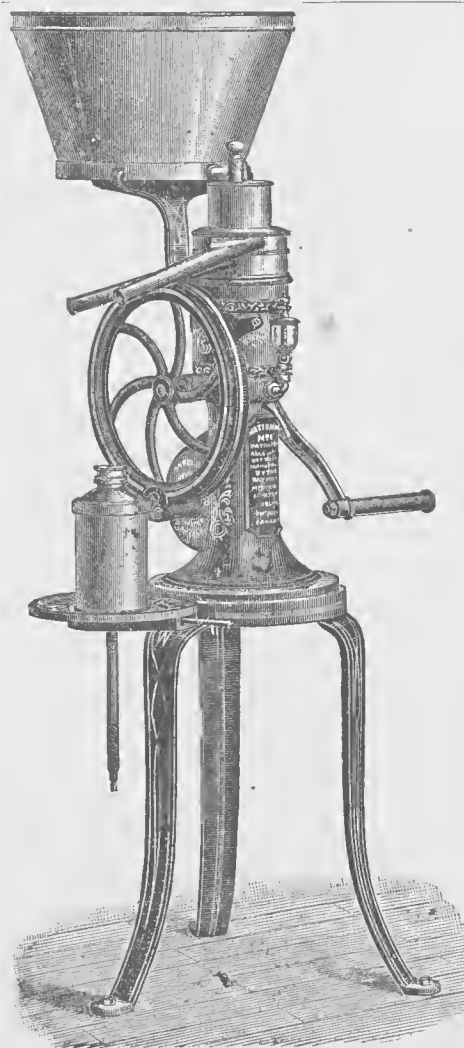
Director Clinton Smith, of the Michigan Station, gives in a recent bulletin the results of his first year's work. Twenty-five cows, fresh in the fall, were picked up by private purchase. They were the best that could be got at moderate prices and were mostly Shorthorn grades. That they were good cows and well fed may be inferred from their average yield of 7,000 lbs. milk and 305 lbs. butter for the year.

Besides pasture they were fed 52 tons silage; 42 tons hay; 10 tons cornstalks; 29 tons beets; 21 tons bran; 15 tons corn meal; 2 tons linseed meal; 1 ton cotton seed meal. This makes not far short of 1½ ton of concentrated feed for each cow. The cost of care was \$19 per cow, the total charge for the year for food and attendance being \$57 per cow. The produce sold rather higher than is usual for common stock, and the final outcome was a profit of \$10 per cow for the year. The best cow of the lot was a grade Holstein that made 10,310 lbs. milk and 401 lbs. butter. It will be interesting to follow the development these cows make after a year or two more of milking experience and see how this high pressure work will pan out.

The cows ought to be in the stable every night now. They will give more milk if kept from contact with the ground these frosty nights.

Shrinkage in milk will be a certain result of exposure to cold rains. Often cows are allowed to roam barren pastures late in the fall when they might far better be in the barn. There is nothing gained, rather actual loss is involved, when cows are expected to forage for a living on frost bitten and scanty herbage.

It does not pay to "scrimp" the food of any animal, or human being either. Surely milch cows and growing stock, as well as sows suckling pigs, or brood mares with colts at side, need plenty of good nourishing food. The man who withholds this is guilty of gross neglect, not to say cruelty, the results of which will certainly be visited upon himself in the end.



THE "NATIONAL" CREAM SEPARATOR.

FOR USE IN FARM DAIRIES.

The "National" is now for the first time offered to the farmers of Manitoba and the Northwest Territories, hitherto the demand in Ontario has consumed the output, but by the addition of new machinery, we have more than doubled our manufacturing capacity, so as to meet the demands from the other provinces.

The "National" No. 1 is without exception the best hand power Cream Separator now offered to the public on this continent.

It is made of the best material, and by skilled workmen, with the aid of the most improved machinery.

It is simple in construction, attractive in style and finish, easy to run—so easy that a child from 10 to 12 years of age can operate it.

It is very easy to clean, on account of the simplicity of its skimming device, and has no equal as a skimmer.

A trial of this machine will prove true all that we claim for it. Try the "National" before purchasing, and you will save money.

... For further particulars
enquire of the manufacturers,

**THE RAYMOND
MFG. CO. OF
GUELPH,
LIMITED,
Guelph, Ont.**

"NATIONAL" No. 1.—SKIMS FROM 330 TO 350 LBS. PER HOUR



Business and Fancy Poultry.

By Poultry Keeper.

Poultry keeping is sharply divided into fancy and commercial, and again sub-divided into fowls for egg production or for table purposes. Each of these pursuits has much to recommend it, but it is a mistake to suppose that any single bird or breed can compass the whole in a manner equal or superior to a bird bred on distinct lines, under special conditions, for a distinct purpose. The pursuit of fancy fowl rearing should only be engaged in by experts, or those who can afford to lose a little money for a time. Let no new beginner imagine that, by the mere spending of money for fowls, he can command unflinching success from the first. There are things that can only be learnt in the school of experience, and all schooling costs money. We have not a word to say against the practice of breeding fowls to rigid standards of form or particular colors and markings of feathers, so long as such are only intended to please the eye, and so long as they are not given an undue value, or the unwary led to engage in what may be a profitless pursuit. Our contention is this, that whilst form and style of feather have an intrinsic value, the particular color and marking of such is of almost no importance whatever for the two commercial considerations of the production of flesh and eggs. The only useful purpose a particular color and marking of feather has ever served is this. Take an illustration. Long observation has led to the universal conclusion that silver-laced Hamburgs lay a larger number of eggs than the blacks, but that the latter produce a larger egg. These are indisputable facts. It is further believed, although the proof is by no means so conclusive on this point as some others, that the silver-laced varieties are better layers than the spangled, whether gold or silver. It is further argued by some that dark Brahmas are harder than the light variety, and Partridge Cochins harder than the Buffs. If it is a fact that certain colors of feathers indicate certain peculiarities of constitution and egg-producing powers, just so far are they a useful guide, in a limited or general sense, but when the question of marks is pushed to such an extreme that they must be of such and such regularity and form or they are declared worthless, then the question of marks at once becomes a purely fancy point, and is of no intrinsic value whatever.

The question of form stands on a broad and solid foundation, and is well worth reviewing. It is an undisputable fact that a bird thick and heavy made about the head is never a first class layer, no matter what the color may be. Such a formation invariably points to flesh rather than egg production. On the other hand, a smart active-made bird, with clean bones, small neck and bold eye, is invariably a good layer, no matter what the color or particular marking of the feathers may be. Thus, whilst form has an invariable value, color and marking of feathers, in many instances, are only fancy points, and can only have a value as an indication of certain peculiarities or in the eyes of the connoisseur. Our object in these remarks is to point out to all amateurs engaged

in poultry-keeping for commercial purposes that it is quite unnecessary for them to strive after having all their fowls with particular markings and colors of feathers, and we advise them not to go to the expense and trouble of breeding many pure-bred fowls, unless they have established a reputation for any variety, and can get a good sale for eggs for sitting purposes, and of pure-bred birds, at enhanced prices for breeding purposes, otherwise they may soon find that they have to dispose of eggs and fowls at ordinary prices, the producers of which have cost them a considerable sum.

If I were going to take over any ordinary farmyard stock that had been bred on the happy-go-lucky principle, my first step would be to draw out all hens above two years old and clear them off at once, or mark them for killing; next I would examine the hens retained and draw out all thick-necked, sleepy-eyed ones, and sell them on their merits as young hens, or put them up for fattening (unless they happened to be laying), and kill them for home consumption. I should then clear off every cock and cockerel on the premises of the old stock, and then look over the hens retained and if of somewhat small size I should purchase young Plymouth Rock cockerels to run with them, but if the hens were strong I should procure Minorca cocks or cockerels, taking care to use only one kind of cock each season, and not two or three varieties in one year. By using one variety only each year a complete change of blood can be introduced annually, and by pursuing this course regularly a class of hens will be produced the equals of any fowls in existence for all-round purposes, and the superiors of any pure-breds for hardness of constitution and profit.

Wyandottes as Farm Fowls.

Wyandottes, writes an English farmer, I have always found to be excellent layers. This, of course, refers to them up till about three years of age, and after that, except in individual cases, they drop off quickly, and if kept for commercial purposes, should, after three years, be sold to make way for young and more profitable stock. The eggs cannot be considered large, but are of fair market size, and in color neither white nor brown, but what is termed brown-tinted. As sitters, I have found them really good, and also most careful mothers, with a tendency for the first two or three years to leave the chickens at from five to eight weeks old. As the hens age, I have found them to keep longer with the brood. The chickens feather quickly, grow fast, and are so hardy that they can be safely hatched in the earliest spring months. An excellent feature in them, when being bred for market, is the fact that if moderately fed they are always in killing condition, and require no special fattening.

Dump a few sifted coal ashes into the poultry yard. The hens will eat a good many of the cinders.

For scaly legs, a good enough plan is to dip the legs into a dish of kerosene once or twice a week for a month.

Keep the hens tame. It is more satisfactory taking care of them and there will be fewer hens with rupture and broken eggs.

Contrary to the usual opinion there are but few breeds of fowls that pay better according to cost than guineas. The flesh of the white guinea is excellent, and they lay a large number of eggs.



MAMMOTH LIGHT
COCKERELS AND
PULLETS FOR SALE.

Brahma

Cockerels, \$2.00; Pullets, \$1.50.

N.B.—This is FIRST CLASS STOCK. I have set the price low, as I have a large number to part with.

Rev. J. E. KIMBERLEY,
Rounthwaite.

1,200 CHOICE POULTRY, PIGEONS.
German Hares. All described in a natural colored
60pp. book 10c, prepaid. J. A. BERGEY, Telford, Pa.

THE RELIABLE POULTRY YARDS.

W. H. Garside, Mgr., Box 299, Brandon.

Stock for Sale—Light Brahmas, B. P. Rocks, C. I. Games, Blue Andalusians, White P. Rock Cockerels, Single Comb White & Brown Leghorns, Buff Pekin Bantams, and pair of English Ring Neck Pheasants.

My birds won 32 prizes this year.

B. P. ROCKS I have fine young stock of all
B. B. RED GAME varieties, from prize breed-
PIT GAME ers. Prices right.
EMBDEN GEESSE S. McCURDY,
AND Carberry, Man.
PEKIN DUCKS

WINNIPEG POULTRY YARDS.

HOUDANS AND GOLDEN WYANDOTTES.

Our Houdans again win 1st prize at Winnipeg Industrial in strongest competition. All our this year's breeding stock for sale at low prices to make room for young birds. Choice cockerels for sale after Sept. 1st. Place orders early and get first pick.

Address—S. WISE, 759 Elgin Ave., Winnipeg, Man.

HIGH-CLASS
SINGLE
COMB

White Leghorns

Have still a few fine young Cockerels for sale. Prices up to 15th of Oct. \$1 and \$1.50 each. Also a yearling, and 2 year old cock, past seasons breeders. No more females for sale.

W. A. PETTIT,
Acme Poultry Yards, Boyd Ave., Winnipeg.

B. P. ROCKS
BLACK MINORCAS
BLACK HAMBURGS
S. C. B. LEGHORNS
INDIAN GAMES

I have a fine lot of young
stock and all this year's
breeders for sale cheap.

Write for particulars.

T. H. CHAMBERS,
BRANDON.

Louise Bridge Poultry Yards

Secure another SWEEPING VICTORY at Winnipeg, July, '99. Winnings on Single Comb White Leghorns—1st, 2nd and 3rd Pairs, 1st and 2nd Breeding Pens; Rose Comb White Leghorns—1st, 2nd and 3rd Pairs, 1st and 2nd Breeding Pens, 1st and 2nd Chicks; also 1st on White Wyandottes, 1st on Black Wyandottes, two 1st and two 2nd on Black Spanish. A record like the above stands unequalled. A few choice birds for sale, including some of my prize-winners. Young stock for sale after Nov. 1st.

GEORGE WOOD,
Louise Bridge P.O., Winnipeg, Man.

Oak Grove Poultry Yards,

LOUISE BRIDGE P.O., WINNIPEG, MAN.

A few pair of young Pekin Ducks from imported and prize-winning stock, at \$4.00 per pair.

My Turkeys are all sold, except those required for breeding stock. Am breeding from two of as fine yards as there are in Manitoba.

I am sole agent for Manitoba and N.W.T. for GEO. ERTTEL & CO.'S VICTOR INCUBATORS and BROODERS. These machines have copper tanks, moisture pans, thermometers, egg testers, egg turners, regulators and lamps. Everything is complete, and every machine goes out with a guarantee that it will do as represented or money will be refunded. Send for 1899 Circular.

Address—CHAS. MIDWINTER,
Louise Bridge P.O., Winnipeg.

Norwood Bridge Poultry Yards.

B. MINORCAS, HOUDANS,
W. WYANDOTTES.

A fine lot of fowl and chickens for sale, many of them 1st prize winners at Winnipeg and Brandon this year. All my chicks bred from 1st prize stock.
JOS. WILDING, Norwood Bridge, Winnipeg.

High Priced Eggs.

The present price of fresh laid eggs on the Winnipeg market should be an inducement for more farmers to cater to the production of winter eggs. The prospects are that eggs will be a good price again this winter, and we see no reason why more eggs cannot be raised on many a farm during the winter. True, better buildings are required, but in many cases these can be secured by little forethought and labor. Even if some actual outlay in cash has to be incurred, it will be amply repaid when eggs are worth 35c. to 40c. a dozen. The care and money expended with proper care in feeding will make the hens a source of profit during the winter instead of a burden, as they often are. Besides, during the winter more time can be devoted to them and the income from the farm kept up during the winter.

The fall is a very good time for a person to begin in the poultry business, that is, of course, if he has some knowledge of feeding and handling poultry. At this time of the year well-grown pullets can be bought cheaply and before spring will have more than paid for themselves. It is also a good time to inspect the yards of the breeders of pure bred poultry. Sometimes they are overstocked and are therefore ready to clear out at a bargain. Buying pullets and yearling birds in the fall is a much surer way of starting than by buying eggs in the spring, for eggs are always more or less expectations, which sometimes fail to materialize, while birds themselves are tangible things, and if properly handled will return a profit.

In buying birds get well grown good stock. Don't take poor half-grown pure bred stock, or any kind of stock, because cheap. It will be dear at any price. Select well-grown birds, because it is the early-hatched pullets that will begin to lay first and give the biggest returns. A good beginning is half the battle. Start right. Don't buy too many or try this plan on too big a scale to start with. Take a year's experience with a fair sized flock before you try it on a large scale. Properly managed, there is money in it. If you don't want to do it yourself, start one of the boys at it, or may be one of the girls, and give them all the help you can. Any one can keep fowl and have them lay when eggs are cheap. That is easy. It is harder to have fowl lay during the winter when eggs are twice and three times the price they are in summer. The easy things everybody can have, but the hard things, with their doubly increased compensations, are only attained by those who desire to excel. So the best things in poultry raising can only be attained by the application of brains and the determination to succeed.

How to Clean the Poultry House.

Cold weather is approaching and fowls that have been roosting out of doors and in odd places should now be taught to go to the poultry house. But before this is done the house should have a thorough cleaning. Nothing does so much harm and causes such loss as the parasites that abound in many poultry houses. Remove all perches and nests and burn the fillings of the nests. Give the roosts and nests a thorough good coating of coal oil, and if desired burn it off. Clean out the hen house, then give it a good coating of white wash with carbolic acid in it. This will make the walls light and destroy pests. The floor and ceiling should be whitewashed as well as the walls. If there are many cracks and crevices in the walls it may be advisable to fumigate the place by burning sulphur. If the walls were

whitewashed only recently, it might do now to wash the walls with a strong carbolic wash and then a few days later fumigate the place. When thoroughly clean, return roosts and nests and put new filling in the nest boxes. Keep a supply of nice dry earth for a dust-bath, and the hens will keep themselves pretty free of lice during the winter.

Poultry Pointers.

Prepare for winter in this month. Examine carefully roofs and windows, and make necessary repairs. Whitewash inside of coops thoroughly, adding an ounce of carbolic acid to each pail of wash.

Kerosene roosts, upper and under side. Gather road dust or dry sand; fill dust boxes, and put a layer of sand in the bottom of each nest box. House a quantity of dust or sand for winter, sufficient to last until spring. This is of far greater importance than most people have any idea of. Health, comfort and profit are all greatly increased by it.

If early-hatched pullets are fully matured, coop them as you intend them to remain for the winter. It is not safe to move them after they start laying, it will interfere with the egg yield. Weed out poor specimens and keep only the best, both male and female.

A few drops of tincture of iron in the drinking water will tone up your moulting hens.

Put your last year's hens and this year's early pullets by themselves, giving them extra care and food, and you will have new-laid eggs for Xmas.

How to Fumigate a Poultry House.

The poultry keeper who whitewashes his hen house four times a year need have no fear of it becoming infested with insect vermin, nor will it be necessary for him to fumigate it, as there will be no object in doing so since there will be no insect life to destroy. But the owner of a poultry house that needs fumigation should set about it in the following way: Remove all nests, perches, and everything that is portable. Put a pound of sulphur in an iron pan with some burning coals in the middle of the house. Then close up the doors, windows, and all other openings, and let them remain so for two or three hours. Afterwards paint the roosts and nest boxes thoroughly with coal tar, and whitewash the house both inside and out with lime. A spraying pump is very useful to get the limewash into the crevices in the roosts and walls, and it is beneficial to add some carbolic acid to the limewash. Once a house is thoroughly freed from vermin it is easy to keep it so by attending to it regularly and taking the precautionary measure of frequent limewashing.

The hen should never be frightened. Oats are not the best nor cheapest food for poultry. Lice are death to chicks. Watch for this enemy.

If you overfeed you will have fat hens and fewer eggs.

Poultry should have an abundance of pure fresh water.

Do not put off building the poultry house until winter.

As a rule the hens with the largest combs will prove to be the best layers.

Over fifty hens should never be kept in a single pen. Twelve to twenty-five is better.

PLYMOUTH ROCKS,

Barred and White (Sid Conger and U. R. Fishel strains). Have 250 to select from. Prices right.

W. F. Crosbie, Manitou.

PEKIN DUCKS,
BARRED P. ROCKS,
WHITE LEGHORNS,
GOLDEN HAMBURGS,
BUFF BANTAMS, also
COCKER SPANIELS FOR SALE.

JAS. F. McLEAN,

Brandon, Man.

Box 394

HOW TO MAKE HENS LAY IN WINTER

Send Card for Pamphlet to

R. Dolbear, Dealer in POULTRY SUPPLIES
1238 Main St., WINNIPEG, MAN.

White Rocks

HOLDERS OF LIEUT.-GOV. PATTERSON'S CUP.

Young birds, also a few choice one and two year old hens, prize winners, for sale.

Brandon, Man.

T. M. PERCIVAL.

Buff Cochins

A few choice Cocks and Cockerels

FOR SALE.

F. D. BLAKELY, 285 Ellen St., Winnipeg.

WHITE PLYMOUTH ROCKS !!

If you want good birds, write for prices to

S. B. BLACKHALL,
606 McMicken St., Winnipeg.

DES MOINES INCUBATOR CO.

The BEST and the CHEAPEST.

95 Per Cent. Hatches are often reported by those who use these Incubators. One reason for this record is absolute uniformity of temperature in egg chamber; correct instructions for operating; has fire-proof lamp. A great mistake it would be to purchase an Incubator or Brooder without first getting a copy of our 148-page Catalogue. Send 3 cents for illustrated Catalogue of Incubator, Brooder, Poultry and Poultry Supplies.

"THE POULTER'S GUIDE" (new edition) 15 cents by mail.

O. ROLLAND,
24 St. Sulpice St., MONTREAL.
Sole Agent for the Dominion.

WINDMILLS.

Sure Investment

By buying

A CANADIAN
STEEL AIRMOTOR.

Will

GRIND YOUR GRAIN,
CHOP YOUR FEED,
PUMP YOUR WATER,
Etc.



No other Machine on the Farm or Home will yield better results.

ONT. WIND ENGINE AND PUMP CO., LTD.
Atlantic Ave., Toronto, Ont.

MANITOBA AGENTS: THE BALFOUR IMPLEMENT CO. WINNIPEG.

When writing advertisers, mention The Farmer.

Live Stock Impounded, Lost, or Estray.

The following is a list of animals impounded, lost or estray since our October 5th issue:—

Impounded.

Arrochar, Assa.—One roadster mare, eight or nine years, sorrel, white face, cut on left side some time ago, WP on right hind quarter. Donald Black, SW qr. 36, 14, 33WI.

Langenburg, Assa.—One steer, about three years, dark red or brindle, very small and thin. Philip Schnider, NE qr. 10, 22, 31WI.

Lumsden, Assa.—One mare, six years old, bay, white star, foal at foot; one mare, black, large white star, aged, branded Y; one mare, aged, grey, branded x, bar below. E. Smith, NE qr. 32, 19, 21W2.

Pheasant Forks, Assa.—One pony mare, six years old, buckskin, black mane and tail, white stripe above hoof on right hind foot. Andrew Johnson, S.E. qr. 10, 21, 9W2.

Regina, Assa.—One red steer, with white on belly, about two years old. S. Beach, 34, 16, 20.

Whitewood, Assa.—One dark iron grey horse about two years old, white spot on forehead, right hind foot white, branded A C on left shoulder, and one bay pony, two years old. C. Davis, 36, 16, 2W2.

Lost.

Argyle, Man.—One light bay filly, three years old, star on face, hind feet or legs white. A. McNabb, 15, 14, 1W.

DeClare, Man.—One brown horse, with right hind foot white, branded G on left shoulder. When last seen had rope on his neck. D. F. McDonald.

Hamiota, Man.—One sorrel horse with halter on and rope attached, with white stripe on face and coming three years old. Jos. Skayman, 6, 15, 23.

Hazelcliffe, Assa.—Two horses, one brown, four years old, hind feet white and white on nose, indistinct brand on left hip; the other a grey horse, six years old, with a cow bell tied on its neck. M. Alm.

Indian Head, Assa.—Two mares, one dark grey, eight years old, and one bay, eight years old, two white hind feet, star on forehead, and with foal at foot; foal with one white hind foot. N. Dick.

Killarney, Man.—Four calves, three heifers and one steer, three red and one white face. T. Forster.

Oak River, Man.—Four heifer calves and one bull calf; one with rope around its neck. Wm. Hays, 5, 14, 22.

Pheasant Forks, Assa.—Twenty head of young stock branded with an anchor on rump both sides of tail. Reward. E. Rickard.

Estray.

Carnduff, Assa.—One broncho, three years old, black, indistinct brand on left shoulder; one broncho, two years old, bay, branded diamond W on left shoulder. W. H. Haughton.

Indian Head, Assa.—One mare, about ten years, sorrel, 10 on left hip, about 1,300 lbs., has harness marks. James R. Beach, 2, 17, 13W2.

Lebret, Assa.—One pony, about three years, sorrel, star on forehead. D. McKinnon, 10, 21, 12W2.

Manitou, Man.—One red steer, coming two years old. Mrs. Deamil, 15, 4, 9.

Moosomin, Assa.—One aged mare, dark brown, irregular brand on right shoulder, left ear split, about 900 lbs. W. J. Doll.

Oakley, Assa.—One gelding, four years old, sorrel, hind feet white, stripe on face. M. A. Adams, 4, 5, 33WI.

Spy Hill, Assa.—One steer, about four years, red, indistinct brand on ribs and side. John A. Brown, 34, 18, 31WI.

Touchwood Hills, Assa.—One bull, eight years old, red, white face and stripe on back. Wm. Ahdemar.

Touchwood Hills, Assa.—One heifer, 2 years, red, small spots on flanks, star on forehead. Ben Gordon, Gordon's Reserve, Kutawa.

Whitewood, Assa.—One red heifer, with white on forehead and white on side. Jacob Halm, 4, 18, 1W2.

Market Review.

Winnipeg, Oct. 17th, 1899.

The fall of the year is always a busy time in the west and this fall has so far been an exceptionally busy one. Winnipeg wholesale houses have experienced an unusually heavy October trade. Heavy movements of general merchandise along with the demand for grain cars has made almost a car famine. The heavy crop and the rapidity with which it has been rushed to the elevators on account of the late season and fine weather has been almost too much for the handling capacity of the railroads, although great preparations were made for carrying a much larger crop than usual. The thought that strikes one when looking over the business situation is the advance in prices that is being made in many lines, and that also in spite of these advances the demand keeps up. The most noticeable of these advances is that originating from the scarcity of iron and steel, owing to the great demand for these goods in shipbuilding and their more general introduction into structural work. During dull times the iron and steel manufacturers eased off and the sudden revival in trade found them not only short in supplies but also short handed. Great efforts are being put forth to keep pace with the demand, but it is going to take years to get ahead of it. Meantime everything that contains iron in its composition is going to advance in price. The farmer was one of the first to feel this advance, as all kinds of wire, nails and all iron tools were the first to feel it, but the advance is now being made in all lines and no telling where it will stop. Tin plate is now feeling the effect as iron is the basis of all tin ware. Next season will see an advance in plows, harrows, binders, mowers and all farm im-

plements. It is thought that binders will go up as much as \$10 to \$15 and mowers from \$5 to \$7.50 each. Glass has also advanced. Cotton goods, especially cottonades, ticking, shirtings, and flannelette goods of all kinds, have been advanced by the Canadian mills and the same has also taken place on the American side. General business keeps booming on both sides of the line. Bank clearings at Winnipeg continue to show a great increase over the same period for last year and over that of 1897 also. Building operations in the city are being rushed along, but there will be a large amount of inside work to finish up after outside work ceases. The Crow's Nest Pass Coal Co. are looking for more men, as they cannot keep up with the orders for coal. Anthracite coal will be a high price in Manitoba this winter. Payments of all kinds, both in city and country, are being made promptly and fully. War with the Transvaal will have the effect of tightening the money market. The increase in ocean freights of 2c or 3c. a bushel for wheat, owing to the withdrawal of so many steamers for transports, will tend to lower prices for our prairie wheat. It is not expected that the war will affect wheat prices unless European complications arise.

Wheat.

The outbreak of war has done nothing, so far as can be yet seen, to improve the price of grain. Chicago on Saturday opened for December at 72½c. and closed 72½c., May opened 75½c. and closed 75½c. Yesterday it opened for December at 71½c. and at midday had dropped to 71½c. May opened 74½c. and at midday was 74½c. To-day the market closed at 70½c. for December, 73½c. for May.

On the local markets, Elm Creek, for a few loads, was reported 58c., Virden and Balgonie 51c. 54c. may be taken as the average for the province of Saturday's markets. Wet weather and bad roads kept down deliveries to a pretty low point and this combined with the slackening of values and the desire to push fall plowing now the land is well soaked, will keep down deliveries for a week or more. This will also help to relieve the severe pressure on the elevators, many of which had got full to their utmost capacity. The total deliveries Saturday would be less than 100,000 bus. for the province, while the output per day for the last 18 days has been perhaps double that quantity.

The inspector's office at Winnipeg has been so busy that it is not able to supply

FOR THE BEST VALUE IN

BUGGIES, WAGONS

GANG PLOWS BICYCLES.

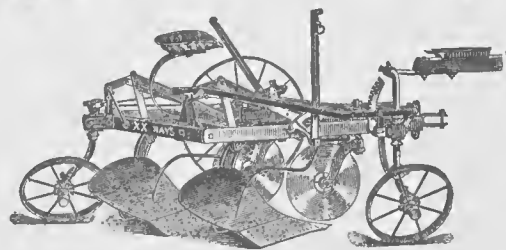
HARNESS, ROBES AND BLANKETS.

Everything at Rock-Bottom Prices, consistent with first-class goods.

A. C. McRAE,

Cor. KING and JAMES STS., WINNIPEG, MAN.

Mention this Paper.



returns for the inspections of the last fortnight. About 3,100 is the number of cars reported, and, as before, the bulk of it has graded high. With lighter deliveries the railroads are likely from now on to keep the elevators going.

It is interesting to note that after several bad years the Australasian colonies will this year have a considerable exportable surplus. The three southern colonies of Victoria, South Australia and New South Wales will have some millions of bushels to export. The price per bushel at Melbourne on an average was 72c. and it goes to South Africa, Spain and England. American steel rails are shipped from Baltimore to Australia and return loads are taken in wheat to Spain, a dozen large steamers carrying 2,000,000 bushels in that way. New Zealand will have an exportable surplus of 8,000,000 bus. The quality of these Antipodean wheats is excellent, and they are blended with other foreign and English wheats. Straight milling, such as is done here with pure Canadian wheat, is almost unknown in England.

The U.S. crop bulletin of Oct. 5, just issued, shows an estimate for 1898 of 2,798,000,000 bus. as the world's crop for 1898 and the mean of three estimates by leading authorities for the present year's crop is about 2,450,000,000 bus., to which the U.S. authorities would add for omissions, which it points out, so as to make this year's total about 2,540,000,000 bus. This brings out a falling off from last year of about 325,000,000 bus. In these estimates the figures for the southern hemisphere are taken from the 1897-1898 crop. That of 1898-1899 makes a considerably better showing, but at the best there is still a very heavy shortage from last year's crop, which, however, was an extra one.

The recent heavy rainfall may be a source of danger in another direction. There is still a heavy amount of threshing to be done in a good many parts of the country. What is in stock will take several days to dry and some of the stacking is not too good. Unless wet sheaves are kept back there is great risk of raw samples being offered from now on. The risk is there and it depends on the prudence of the farmer whether his offering at the elevator can be accepted or not.

Oats

The market for oats is inclined to stiffen and at points where a week ago 20c was paid 22c. is now being offered. Most of the oats that have been delivered up to date were sold in advance and on Saturday deliveries of oats all over the province were very light. This is due partly to the state of the roads, but also to the desire to make the most of the short time available for fall plowing. The land is now in the best of trim for working and the prices of grain are not so tempting as to induce anyone to leave work on the land. There are, we understand, many oats still standing in the stook, left there with the idea that the fine weather would continue and so allow of stook threshing—a very unlikely thing now for some time to come. It is not likely that the quality of the oats will be much affected by the rain, but it is pretty certain to turn out that there will be nothing gained by those who deferred stacking and took chances in the stook.

Latest reports show a very poor oat crop in the British Isles. Scotland, always to the front with this variety, has about the lightest crop in some districts that has been seen for many years. East Lothian and Ayrshire complain bitterly and in some cases the weight has gone as low as 30 lbs. to the bushel. Much of this crop was used for milling, but this year will only make poor stock feed. With our fine quality and crop our millers ought

to be able to do something in that market this year.

Barley.

Little doing, and prices only nominal, 24c. to 26c.

Flour and Feed.

Local prices for flour and feed continue unchanged:—Patents, \$1.85; strong bakers, No. 1, \$1.65; No. 2, \$1.40; XXXX flour, \$1; bran, \$11 per ton; shorts, \$13 per ton; chop feed, \$20 to \$22 per ton.

Flax.

The last year's crop was limited in area and \$1 per bus. is now quoted as the latest figure at country points here. The quality is not of the best and dirt is complained of by the buyers.

Hay.

Hay is looking up, the waste by prairie fires having caused a shortage in the otherwise ample supply. Baled hay is now \$6 to \$7 at Winnipeg.

Horses.

The demand for horses keeps up wonderfully well. Several lots have been disposed of since last report. Western horses that have been partly broken bring from \$50 to \$100, according to size and quality, while horses from the states south of us and from Ontario that have been broken are worth from \$125 to \$175, according to size and quality.

Cattle.

Export cattle are moving east as fast as the exporters can get them away. There has been no change in prices since last market report, from 3½c. to 3¾c. being the going price for export steers. Fancy or very choice lots might bring somewhat higher prices. Butchers' cattle bring ¾c. less off the cars at Winnipeg. A western dealer recently sold a bunch of four or five year old steers to Gordon, Ironside & Fares which averaged a little over \$53. The cattle are in fine condition considering the watery nature of the pasture the greater portion of the season. Choice American cattle continue to bring high prices, with no prospect of lower ones. At Montreal the bulk of the export cattle go for 4½c. to 4¾c., although top notch is 5c. Butchers' cattle bring 3¾c. to 4½c. according to quality. Dressed beef is worth from 5c. to 7c. a pound. Veal 7c. to 8c. The beef industry to the west is to have another aid in the abattoir and cold storage warehouse being built at Calgary by P. Burns. The abattoir is to have a capacity of 300 steers per day. This firm are handling meats for the Kootenay trade and with such facilities for killing and handling stock should greatly improve the market for cattle in the west.

Milk cows continue in good demand at from \$25 to \$45.

Sheep.

Market quiet, supplies practically all from the west, bringing 4c. to 4½c. per lb.

Hogs.

The market continues quiet at a little easier figures than are quoted in last report, 5c. to 5½c. being top figures for choice bacon hogs delivered in Winnipeg. Top figures in Ontario are about 4½c. Dressed pork is going at 7c. a pound at Winnipeg.

Butter and Cheese.

Creamery.—The creamery season is now practically over and the make is becoming more and more limited. Prices at the creameries f.o.b. are 21c. to 21½c., which is slightly better than at our last report. Once the local creamery make is cleaned up buyers will have to depend on eastern winter make. Owing to the dry fall and high price, stocks in the east are well

shipped out and the accumulation of stock is very small. The same is true of the western states, therefore choice butter is likely to continue a good figure. The only thing that will tend to pull down prices, so far as Manitoba and the west is concerned, is the arrival on the Vancouver market of Australasian grass butter. This may be expected any day now. Manitoba creamery is selling at 25c. in Vancouver and is likely to advance.

Dairy Butter.—Nice fresh separator pound prints, neatly done up in parchment paper, are worth from 18c. to 20c. delivered in Winnipeg. There is a good opening here for enterprising buttermakers throughout the province. With a good shipping box butter can be shipped regularly to the city and good prices obtained. The cost of shipping can be found from the nearest express agent and is not as much as some people think. Put yourself in communication with the commission houses or the large grocers in Winnipeg. Feed is plentiful and with the improved stables that are being put up more winter dairying will be done. Dairy butter in tubs of good quality runs from 12c. to 15c. a pound, while poorer grades drop below 10c.

Cheese.—The market is still high, 12c. is the going price, but the factories are holding out for higher figures. The season is almost over and stocks on hand are not large anywhere in Canada, supplies having gone forward to England as fast as made. Makers in the east are holding out now for 12c. It is likely that quite a number of the Ontario cheese factories will make until late in the fall, but the quality of fadder cheese is never as good as that from grass and what is made during November will be just so much less butter to go on the market. At Vancouver cheese is selling for 15c.

Poultry and Eggs.

No poultry is moving yet in a wholesale way. Quite a supply has come into retailers' hands, but it is small, even for the thanksgiving trade, and for turkey, especially, there is a good demand at 12½c. a pound. Fowl 55c. to 65c. a pair, chickens 40c. to 50c.; ducks 60c.; geese 60c. to 65c. each.

Eggs.—Supplies coming in are small, 17c. to 18c. per doz. is being paid for eggs by the crate delivered in Winnipeg. Strictly fresh eggs to private customers are bringing more than these prices. The McCready Mfg. Co., Winnipeg, have received an order from the British Government for a large quantity of their ovo or evaporated egg powder. It may be that the troops in the Transvaal will be eating Manitoba eggs before long.

Hides and Wool.

In keeping with the higher prices for beef on the American market the price of hides has advanced a ¼c. since last market report. They are now 7c. to 7½c. for No. 1 inspected hides, No. 2, 6c. to 6½c., No. 3, 5c. to 5½c. Branded hides grade No. 2 and bull hides No. 3. Kip 6c. to 6½c.; calf, 8c.; deakin skins, 25c. to 35c. each; sheepskins, 50c.; country skins and lamb-skins, 30c.; horse hides, 50c. to 75c. each.

Potatoes.

Potatoes are scarcer than most people imagine. Many fields have turned out poorly and the demands from railroad camps have been heavy. 30c. a bushel is the going price, but we know of quite sized lots sold for 35c., and feel sure that within a week or so the price will reach this figure if not go higher.

"It's good 'nuff fur ye," said he to his son, whose money had just gone to the inside pocket of the shell-game man at the county fair.

THE NOR'-WEST FARMER

ISSUED TWICE A MONTH.
ESTABLISHED 1882.

The only Agricultural Paper printed in Canada between Lake Superior and the Pacific Coast, and issued on the 5th and 20th of each month.

THE STOVEL COMPANY,
PROPRIETORS.

CORNER McDERMOT AVE. AND ARTHUR ST.
WINNIPEG, MANITOBA.

SUBSCRIPTION TO Canada or the U.S., \$1 a year, in advance. To Great Britain \$1.25 (5s. sterling). Agents wanted to canvass in every locality, to whom liberal commissions will be given.

ADVERTISING RATES.

Transient advertisements, for less than three months, 15c. a line (each insertion). Terms for longer periods on application.

All advertisements estimated on the Nonpareil line—12 lines to an inch. A column contains 128 lines.

Copy for changes in advertisements should be sent in not later than the 27th and 14th of the month to ensure classified location in the next issue. Copy for new advertisements should reach the office by the 30th and 17th of each month.

TO OUR SUBSCRIBERS.

It is the intention of the publishers of this paper to admit into their columns none but reliable advertisers, and we believe that all the advertisements in this paper are from such parties. If subscribers find any of them to be otherwise, we will esteem it a favour if they will advise us, and we will at any time give our personal attention to any complaints which we receive. Always mention this paper when answering advertisements, as advertisers often advertise different things in several papers.

LETTERS.

Either on business or editorial matters, should be addressed simply "THE NOR'-WEST FARMER, P. O. Box 1310, Winnipeg," and not to any individual.

Look at Your Subscription Label:

When you pay your subscription, watch the name label on the next two issues which you receive. On the first issue following payment, it might not give the correct date—the type-setting machine may make an error and the proof not be corrected before mailing day. But if the date is not correct on the second issue please notify us by postal card.

Look at the date label now. Are you in arrears? Are you "paid up" to the end of 1899? The label will tell you. If in arrears, please renew promptly.

Subscribers who miss any of the issues of "THE NOR'-WEST FARMER" should drop us a card at once and secure same, as we want every subscriber to get every copy. Do not delay in sending, as our supply of extras sometimes becomes quickly exhausted.

WINNIPEG, OCTOBER 20, 1899.

TO OUR SUBSCRIBERS.

A number of the annual subscriptions to The Nor'-West Farmer expire at the end of the present year. As there is always a rush of work at the close of the year, subscribers will greatly oblige the publishers if they will send in their renewal subscriptions as early as possible, so that there may be no delay in marking them upon the mailing lists.

The Nor'-West Farmer will in future rigidly adhere to the cash in advance system, as being the most satisfactory to both subscribers and publishers.

The publishers feel more confident than ever that our subscribers are satisfied with the paper. We have now issued twice a month (instead of monthly) for ten months, and it is our intention to continue doing so. Several new features are contemplated for 1900, and no pains or expense will be spared to make it a credit and joy to every farm home.

The Nor'-West Farmer has at the present time over 10,000 subscribers on its mailing list. This exceeds by thousands that of ANY OTHER publication in Western Canada. The reason for this large number is apparent.

Send in your renewal subscription at once, also try and send us the name of one new subscriber for 1900. The paper will be sent from now till January 1st, 1901, for the yearly price, \$1.00.

THANKSGIVING.

Thou, Lord, art our life and the length of our days;
Our voices to Thee in thanksgiving we raise;
We thank Thee, we praise Thee, for sunshine and rain,
For calm and for tempest, for pleasure and pain.

The summer and autumn, the winter and spring,
To Thee shall their tribute of gratitude bring;
The sea and its fullness, the earth and the air,
All tell of Thy goodness, Thy glory declare.

We thank Thee, we praise Thee for plenty and peace,
For Thy full flowing bounty that never doth cease,
For wealth of the ocean, the forest and field,
And all the rewards that our industries yield.

Fleet-footed time has again brought round the day of the year set apart for national thanksgiving and praise. We feel sure our readers will agree with us when we say that we have indeed great reason as a people to be thankful to the Ruler of the Universe for the many blessings He has bestowed upon our fair land during the past year. Though our cousins to the south of us have had homes made sad by the war our homes have known no pestilence and famine, only peace and plenty. Long may this be our portion. Our relations with our neighbors to the south have been most harmonious, a continuation of the friendly feeling engendered by the action of the motherland during their war with Spain. There have been rumors of trouble over the Alaskan boundary and other matters, but they have only been ripples on the sea of peace. Our relations with the mother country have been more firmly cemented and in her present trouble in South Africa our love for her will take a tangible form.

As farmers we have great reason for thankfulness, especially in the west. There have been untoward circumstances 'tis true. Our brethren in the east have not had quite such heavy crops as usually fall to their lot, and have suffered some from drouth, but an Allwise Hand has also provided compensating conditions. The drouth in England has caused an increased demand there for our dairy products at greatly advanced prices, and this has not only benefitted the drouth stricken districts, but all parts of the country. The shortage of cattle south of the line, coupled with the increased demand for pure-bred stock of all kinds for breeding purposes, has greatly enhanced the value of all kinds of stock, so that the returns per farm must be nearly equal to those of other years. In the west the unusual rainfall of last fall insured plenty of moisture for crops this year, and with the heavy precipitation this spring has resulted in an excellent crop, singularly free from weeds. Though somewhat late, harvest conditions have been most favorable, and through Alberta had a trying time just before harvest, everything has now turned out well. The fine weather that has been granted us, though favorable for prairie fires, of which there have been a few bad ones, has seen the bulk of our splendid crop safely handled. The only cloud, if it may be called such, is the outbreak of mange on the cattle ranges, but this will only be a temporary inconvenience.

The rapid settlement of our prairie lands, the progress that irrigation has made in Southern Alberta, the improve-

ment in our farms, buildings, stock and methods of cultivation, and the good prices that we have obtained for our farm products, are all sources for thanksgiving and praise. As a nation we have great cause for thankfulness in the continuance of the revival in trade that the close of last year saw begin, and for its great improvement during the year. Then let us be truly thankful for the blessings of the year and for the fair land in which we live.

Lord of the harvest, once again
We thank Thee for the ripened grain
For crops safe carried, sent to cheer
Thy servants through another year.

AGRICULTURAL EDUCATION.

Agricultural methods of to-day and those of twenty years ago present somewhat the same comparison as the old-fashioned stage coach and the modern limited express. The agriculturist is rapidly emerging from the laboring rank to that of the skilled mechanic and keen business man. If modern invention has remodelled our great manufacturing industries, it has simply revolutionized agriculture. The invention and general adoption of the thresher, header, self-binder, mower and stacker, not to mention the hundred and one more or less complicated contrivances for the cultivation and harvesting of roots, the results attained and time honored customs exploded through the efforts of an army of skilled chemists the world over, who are devoting their lives to the advancement of agriculture, the valuable conclusions reached by practical experimentalists, carrying on investigations covering the whole range of intricate agricultural problems, testing and breeding of varieties for every conceivable climatic and soil condition under the sun, all these factors have wrought such changes in farm economy and operation, that if the last generation visited the former field of action, it would stand aghast at the unprecedented advancement and sweeping changes adopted on the farm within, comparatively speaking, recent years.

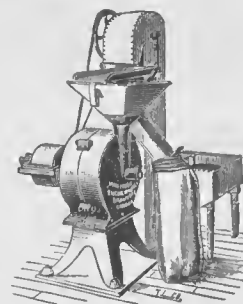
The question now arises, is the average farmer keeping pace with the times? The reply must unhesitatingly and decidedly be given in the negative. We are taking the utmost pains to educate our children to become good citizens, but it is equally important, in the rural districts, to educate them to become good farmers, and still more so, to educate a large proportion of the present generation of farmers up to discarding their "Rip Van Winkle" methods as well as to place valuable facts and the latest information within the reach of every agriculturist in the country, progressive or non-progressive. It is gratifying to find that the governments of both the Province of Manitoba and the Northwest Territories are alive to the importance of this feature of their work. Sufficient is not being done, however. The expenditure of the Ontario Government upon strictly agricultural educational objects aggregates more than \$93,000.00. Manitoba expends in all some \$16,000.00, while the Northwest Territories is at the bottom of the list with a total appropriation of \$2,500.00, partly for institute work and partly for agricultural experiments. It cannot be successfully argued that the need for work of that nature is greater in Ontario than it is in the west. Every person in possession of average common sense must admit, that exactly the reverse is the case. The rural population of the west embraces people from every country in Europe, totally ignorant as to our conditions of soil, climate and cultivation. To illustrate the point, we have only to refer to the recent influx of Doukhobors

The Waterous Engine Works Co., Ltd.

WINNIPEG, MAN.

PORTABLE SAW MILLS,

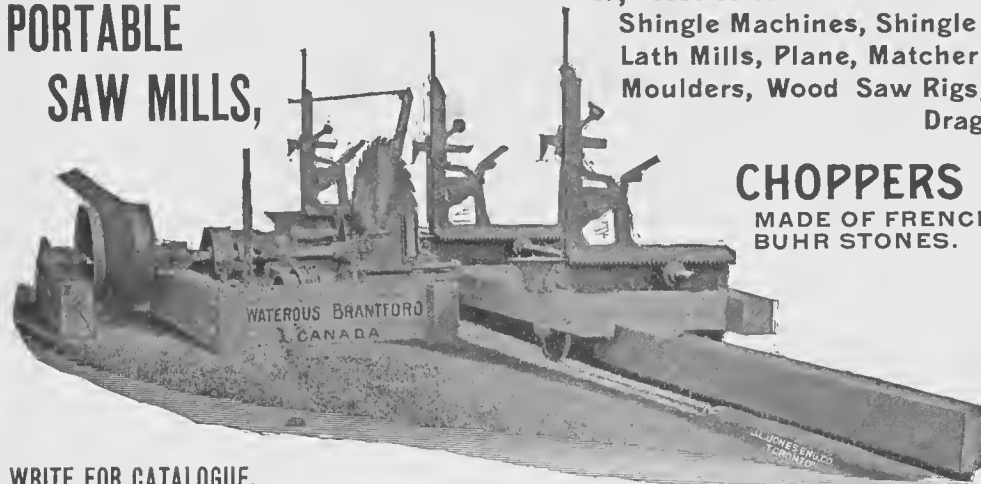
Shingle Machines, Shingle Jointers,
Lath Mills, Plane, Matcher and
Moulders, Wood Saw Rigs,
Drag Saw Rigs



CHOPPERS

MADE OF FRENCH
BUHR STONES.

Now is the time to think of
Saw Mill work and of Chop-
ping after the threshing sea-
son is over. We have several
second-hand Saw Mills and
Standard Choppers, thor-
oughly repaired and in good
order. Place your order be-
fore it is too late.



WRITE FOR CATALOGUE.

and Galicians and the proposed large immigration from Finland next year. The Nor'-West Farmer does not wish to enter into any controversy as to the merits or demerits of these people as settlers, the fact remains, that they are here and that it behooves our respective governments to see that missionary work along agricultural lines is not neglected. A great number of our settlers came direct from Great Britain or our eastern provinces, and they also have much to learn as well as to unlearn. Apart from that, the whole farming population, irrespective of creed or nationality, is vitally interested in keeping abreast of the latest developments in the science and practice of agriculture.

Our public lands are controlled by the Federal Government and while a similar state of affairs exists in the United States, there is this notable difference, that south of the line land-grant colleges maintaining courses of instruction in agriculture have been established in every state under the Acts of Congress of the 2nd July, 1862, the 30th of August, 1890, and the Hatch Act of the 2nd March, 1897. Some 625 professors are actively engaged in imparting instruction at these colleges. The scientific staffs are also utilized in connection with farmers' institute work, or as it has been appropriately called, the great "university-extension" movement. Twenty-nine thousand persons received instruction at agricultural colleges in the United States during 1897 and the publications of these institutions, aggregating some 16,000 pages, were mailed to over half a million people. This is something like a scheme of agricultural education!

What is being done in Manitoba and the Territories? The former province is yet without an agricultural college, the "Central Farmers' Institute" is demoralized for want of funds, and although institute meetings are being held and some instruction given in nature study in the public schools, the ground so far has been merely "scratched."

Agricultural education in the Territories, as might be expected, is in a still more undeveloped state. The Federal Government must, however, shoulder the sole responsibility here. A mere pittance is doled out to the Government of the Territories with which to defray the cost of administering that vast country, which is rapidly being filled up, largely with aliens of the most unprogressive description. Some good work has been done by the newly established Department of Agriculture there in organizing institute meetings and initiating agricultural ex-

periments, but only a ridiculously small sum is available for agricultural educational objects, which have in the past, of necessity, been confined to purely rudimentary work.

The remedy is contained in a nutshell. The Federal Government should either hand over the public lands within Manitoba and the Territories, or part of them, to be administered locally, which would enable us to defray the cost of the agricultural education of the people, and consequent development of the country, out of the revenue from the public domain, to which it is properly chargeable—or, let the Dominion Government provide sufficient funds for such services, on the same basis as has been adopted to the south of the line. In the meantime, the people here, who are spending the best years of their lives in colonizing this country and enduring more or less of the hardships incidental to all pioneering, object strongly to have this "Northwest Estate" administered for the especial benefit of the eastern provinces, while the latter, as well as the Province of British Columbia, are enjoying the revenues from their lands and are consequently able to develop locally every branch of agriculture to the very utmost, establish efficient agricultural colleges, in fact, extend the strong, guiding hand only possessed by government, seconded by the necessary expenditure, to raise agriculture to that lofty plane where similar encouragement has placed it in other provinces, and incidentally, enter into unequal competition with the farmers of Manitoba and the Territories, who do not enjoy these educational facilities and government assistance.

SIR JOHN CARLING.

Sir John Carling, ex-Minister of Agriculture for the Dominion of Canada, has just celebrated his golden wedding and his many friends and neighbors in London, Ont., are congratulating him on the glad event. Sir John has in his own way been a most valuable and deservedly popular man among people of all shades of politics. In Ontario he was Commissioner of Agriculture and Public Works and when he afterwards joined the cabinet of Sir John Macdonald he became Minister of Agriculture for the Dominion and in that capacity had a great deal to do with the start of the Experimental Farm system, which has rendered invaluable service to all Canada. In his appoint-

ments to that service Sir John rose above all party and personal considerations, looking only for fitness as the supreme test of eligibility. How well he planned the work and picked his men all Canada can testify, and The Nor'-West Farmer is glad to pay its share of tribute to this old and true friend of Canadian agricultural progress.

A HIGH STANDARD.

At a recent meeting of the Winnipeg health committee a report of Dr. G. Bell, provincial bacteriologist, was presented on the analysis of samples of milk taken from the delivery wagons of city milk men. Dr. Bell prefaces his report with a standard, with which the individual tests may be compared. He says: "A fair standard to insist on would be a sample containing 3.5 per cent. fat, 8.5 per cent solids other than fat and 12 per cent. total solids."

The Farmer thinks that Dr. Bell is setting a pretty high standard for the milk men of Winnipeg. Of course there is nothing like aiming high, but there is a possibility of aiming too high and we think he has done so in this case. Average milk contains about 3.5 per cent. of butter fat, but the variation in normal milk runs below this and is generally stated as varying from 2½ per cent. to 5 per cent. and over in exceptional cases. To place the average as a standard will undoubtedly work harm to some dealers who have good honest milk. Standards have been made by various cities and states, but very few of them have placed the standard as high as Dr. Bell has placed it. They have been careful to place it below the average so as to work as little harm as possible and yet insure the public a good article. The following are some of the standards in use in several of the states:—

	Fat.	Solids not fat.	Total solids.
Massachusetts..	3.7%	9.3%	13 %
" in May and June	—	—	12 %
Minnesota..	3.5%	9.5%	13 %
Vermont ..	3.25%	9.25%	12.5%
New York ..	3.0%	9.0%	12.0%
New Jersey..	—	—	12.0%
Michigan ..	3.0%	9.5%	12.5%
Wisconsin ..	3.0%	—	—
Iowa ..	3.0%	—	—
England..	2.5%	9.0%	11.5%

These legal standards determine the limits for fat and solids below which the

milk offered for sale must not fall. England allows the greatest latitude and where normal milk will sometimes contain as low a percentage of butterfat as 2.5, it is only fair that the standard should not be too high.

Of 45 samples taken from the cows, some 12 fall below Dr. Bell's high standard. Of these 6 fall below 3.0 per cent. and only 2 fall below the English standard of 2.5 per cent. On the other hand one sample runs as high as 7.6 per cent, others 6.5 and 7 per cent. This shows one of two things: that Winnipeg is being supplied with a wonderful quality of milk or else the samples for testing were not properly taken. We do not know how they were taken, but the mere fact that samples were found to contain over 7 per cent. of butterfat and another to run as low as 1.7 per cent. would indicate that the top of a can containing considerable cream was taken in the one case and the bottom of another can in the other. Mixed milk usually averages well. Before results of analysis are published and compared with a fancy standard to the detriment of a man's business, standards should be adopted by the city, then all would know what they had to comply with. Then, too, the greatest care must be exercised in sampling. To simply take a sample from the top or the bottom of a can is not enough. The milk in the can should be thoroughly stirred so that an even sample of the can will be obtained. Then one can may not be a fair sample of the milk in other cans. To get this all the milk should be mixed together after milking and a sample taken.

The season of the year at which the sample was taken has something to do with the percentage of butterfat. In the analyses before us more than half the samples that went below Dr. Bell's standard were taken in June, when cows are likely fresh and the pastures very watery. There is a difference when it comes to fall, the milk is richer then and it is not fair to give out that the rich milk of nearly dry cows is a true sample of a dairyman's milk.

We have been told that some dairymen cream the evening's milk, mix it with that milked in the morning and sell the mixture as whole milk. The Farmer does not wish to be understood as countenancing such methods when advocating a lower standard than that suggested by the bacteriologist. What The Farmer does want is a reasonable standard set by law below which the milk shall not go and such a standard to be as fair as possible to all concerned.

—The programme of the Elevator Commission will be found on page 771.

—Vol. V. of the Kent or Romney Marsh Flock Book, containing the record of the breeding of 54 flocks and other information, has just been published by secretary and editor, W. W. Chapman, Fitzallan House, Arundel St., Strand, London.

—Commissioner McCreary estimates that between 35,000 and 40,000 people have come to Manitoba and the Northwest so far this season. This does not include about 2,500 people that went into Western Canada from Utah. The season has not yet closed and there may be many more settlers arrive before it does.

—Jesse Collings, the well-known English Radical M.P., as reported by the London (Eng.) Times, says: "The more he sees the more he is amazed at Canada's resources, and he wonders that he has

lived a long life without realizing the importance of this great colony. Canada's value, he has stated, would only be brought home to Englishmen as it had been brought home to him. They must see, it in order to understand how ignorant they have been of one of the most magnificent countries of the globe."

—The Illinois Agricultural College, which has long held an inferior position among the similar institutions down in the States, is now forging ahead to good purpose. The coming session it will have 11 instructors in agriculture and one for dairy work. Practice with science is the call now and the latest instructors engaged are one man for "soil physics" and one for special farm work. Institute work to a large extent will also be attended to. The new men in all colleges, Canadian and American, are young, good all round men, but with special training in their own departments.

—The farmers' elevators have been doing a heavy business this fall wherever there is one. In one town it was reported some weeks ago that the farmers' elevator there had paid out \$240,000 for wheat, while the other half dozen elevators in town had not purchased \$70,000 up to the same date. This farmers' elevator cleaned the wheat and paid only for the actual weight of cleaned wheat, which the farmer could see weighed for himself. The cleanings he is at liberty to take home. This is satisfactory to farmers, as they know then that they are getting paid for all the wheat there is in their load and no guess work about the dockage. There is room for more farmers' elevators and in it lies a solution to many of the elevator troubles. Co-operation among farmers would soon settle this as many other difficulties.

Prospects of Irrigation in Alberta.

The following article from the Lethbridge News of a recent issue explains itself and shows how sanguine some of the people of that district are in regard to the prospects before the district and especially as to the great results that are to

follow the introduction of a good irrigation scheme:—

"The more we learn about irrigation and what it has been the means of accomplishing in other parts of the country, the brighter our hopes become in regard to the prospects of this district. In a lengthy interview last week with a gentleman who had travelled through an irrigated country, we were able to furnish our readers with a faint idea of what is on the eve of opening up here. Some have since made the remark that the report was greatly exaggerated or chiefly imaginary on the part of the writer, but such was not the case. We have no desire to deceive the public in any way whatever, and in this matter we do not think the truth was over-stepped at all. Consequently we can look forward with very bright anticipations. Men in a position to know, inform us that here is to be found as good—if not better—soil as there is in any part of the west. Our climate is comparatively mild the year round, there is no danger of frost or hail storms, as is the case in Manitoba or other parts of the Territories, and, as we will now soon be able to overcome the only difficulty—that of drought—by securing irrigation, there is every reason to believe that this will very soon be the finest farming community in the Canadian Northwest. It will not merely rest with wheat and a little barley and oats, but will be more of mixed farming, as they have it in Ontario. After a careful study of the situation and climate, and, as well, hearing what others have done under similar circumstances, we are firmly of the belief that not only vegetables, but hard fruits of all kinds, can be grown successfully in the Lethbridge district. We are well borne out in this belief by the fact of how nicely various kinds of vegetables have been grown this season along the river, and even in some parts of the town. Owing to an unusual amount of rain there have been some really wonderful results in vegetation. When we become so situated that we are no longer dependent upon the rainfall, and always have a warm sun to promote growth, the prospects which loom up before us are hard to describe. This is the impression of those who carefully study the situation, and this same fact is going to be the means of this district becoming rapidly settled during the next two or three years."

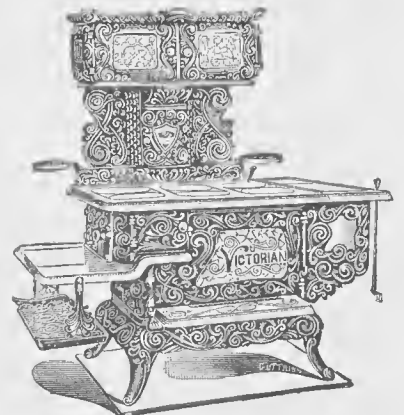
THE VICTORIAN RANGE

This is a new wood Range—our latest production. The oven is large and well ventilated; large fire-box—six holes on top, thus giving more room for work. Takes up less room in kitchen, and will bake with less fuel than an ordinary cook stove. Ask your dealer for a Victorian Range.

EVERY RANGE IS FULLY GUARANTEED BY US.

COPP BROS.

**HAMILTON, TORONTO
WINNIPEG.**





While our columns are always open for the discussion of any relevant subject, we do not necessarily indorse the opinions of all contributors. Correspondents will kindly write on one side of the sheet only and in every case give the name—not necessarily for publication, but as a guarantee of good faith. All correspondence will be subject to revision.

The Lubber Grasshopper.

A subscriber from Bates sends us in a sample of a large grasshopper which Dr. Fletcher, of Ottawa, identifies. He says: "The large grasshopper has been called the Lubber Grasshopper and also the Western Cricket. However, it is not a true cricket and has no recognized common name. The scientific name is 'Anabrus purpurascens,' and I suppose we might translate a very appropriate name from its generic name, which is derived from two Greek words—elegant and an, the prefix meaning not, and call these insects 'Ugly Locusts.' The large shield on the shoulders is the thorax, the female (your specimen was a male), has a long ovipositor nearly an inch long projecting from the end of her body. These insects are sometimes very destructive to crops, the eggs are laid in August, but the young do not hatch until the following spring."

The San Jose Scale Act.

Jno. Renton, Braeside, Deloraine, Man., writes: "It has always appeared to a large number of people in this province that the San Jose Scale Act was passed in the interests of a few Ontario and Quebec nurserymen, however that may be, it is evident to all that the act is not in the interests of the people of Manitoba and the Northwest; but it seems that the interests of Manitoba and the Northwest have always to be sacrificed when it is in the interests of a few people in Ontario and Quebec. There has not been one good reason advanced why Minnesota and Dakota should not be exempt from the operation of the said act. The action of the Government last spring is proof that the act is bad and uncalled for. Again, we have a new phase of this act: it seems that on the 21st day of September an order-in-council was passed allowing cottonwoods, otherwise called necklace poplar and so on, grown in and shipped from the State of Dakota, shall be exempt from the operation of the said act for a period from the 1st October, 1899, to 1st January, 1900. Now, I would like to ask, who is this order-in-council intended to benefit? Certainly not the Manitoba farmer. Had this order-in-council been passed in England we might not have been surprised at the ignorance of the country it displayed. But when the members of the Government at Ottawa pass an act that trees may be imported from the 1st of October to the 1st January I would say that they know little about this country and care less, or perhaps this order-in-council was passed to enable some Brandon nurseryman to get in a lot of trees this fall and heel them in so that he may make something out of the farmers and others in the spring. It is quite evident that it is not for the people.

Again, Mr. Editor, why are these trees to be permitted to be entered at Brandon only, why send the people 75 or 100 miles when there is a custom house within a few miles of their home? Is this the way to encourage the settlers of Manitoba and the Northwest to plant shelter belts about their homes and thereby make the homes

of Manitoba and the Northwest home-like? Would it not be better, instead of putting all the obstacles and hindrances in the way of tree planting in this country, that they did all they could to encourage tree planting of all kinds suitable to the province?"

Note.—By being entered in the Brandon district does not necessarily mean that the trees will have to go to Brandon. We presume they will go to the custom house nearest to their destination which is under the control of the Brandon office. The absurdity of this act is not so much the point at which trees may be entered as it is the season of the year at which they are allowed to enter. Against this we cannot protest too strongly.

Sheep on Shares.

Sheep, Alta: "Can anyone inform me of the usual way of putting out sheep on shares? What proportion of the increase and wool is usually given to the person taking the sheep?"

Note.—Will some of our subscribers send in a reply to this query?

Largest Breed of Horses.

J. C., Newdale, Man.: "Kindly tell me which is the largest breed of horses in existence and the weight of a few of the heaviest of them. It is contended by some that the Shires are the largest, by others the Clydesdales. All the Shires that I have seen in this country seem to be smaller than the Clydesdales."

Answer.—The Shires are generally conceded to be the heavier breed of the two you mention. The weights of some of the heavier ones we have not at hand. Few of the best specimens of the Shire breed have found their way to Canada. Good animals are worth too much money and have always been retained in England.

Sowing Maple Seed in the Fall.

G. B. Johnston, Austin, Man.: "I intend having a shelter bluff of maple. I broke the land for it last July, soil, sandy loam. As spring is a very busy time would it do to sow the seed about last week in October, as then I have more time than in the spring? How far apart each row? How close each tree in the row?"

Answer.—It will do quite well to sow as you suggest, and for that sort of land sowing is preferable to planting. For shelter belts there are various plans. The outside row should be pretty thick so as to be low down and close and kept so. Two rows of this sort will hold snow without breaking down as taller ones are apt to do. They may be only three feet apart. To grow trees inside of that six to eight feet apart and afterwards thinned out in the rows to four or six feet apart is suitable. Be sure to keep them well away from the garden or buildings they are meant to protect. This is the grand mistake of all beginners. Fifty yards off may be close enough, otherwise it will collect snow instead of warding it off. Don't spare the seed; you can thin afterwards.

Joining the Mounted Police and Ranching.

A young farm hand asks as follows: "I wish to join the Mounted Police. What is the plan of joining and what are the particulars about joining, age, etc., etc.? Where would be the best place to go to join and will they take anyone in who is a little short-sighted, but all right in bodily health? Is it worth joining?"

Answer.—We think that shortness of sight is a serious disqualification for such

work. The pay is only moderate and preferment may be slow, but we advise you to write the Commanding Officer at Regina, who can give you full particulars.

2. My brothers wish to go cattle ranching. One had a little experience with cattle, the other is from England and inexperienced. Can they get wages all the year round and are the wages good? Where would be the likeliest place for them to go?"

Answer.—It is not likely that any rancher will pay much to green hands, and their success afterwards will depend entirely on their fitness. The life is rather rough, perhaps, but some people like the free, active, healthy existence. In a new country such as this everything depends on the aptitude of the learner. Get the address of one or two ranchers between Moose Jaw and Calgary.

An Ironclad Cow.

A correspondent wants us to rustle up from an old issue of The Farmer a description of the cow suitable for the outlying districts of Manitoba, and to mate which the C. P. R. proposes to supply Ontario bred Shorthorns. He says that is the only perfect definition he has ever seen of the Manitoba scrub, which he describes as "a beast that can get as small a rear end to the blizzard as possible and can help herself from the strawstack when hungry, lick snow when dry and spends the balance of her time in looking for something more palatable in the neighbor's fields. This is what is called a rustler. Generally has half a tail—the dogs the rest. She can outrun most of the dogs in the neighborhood and all the horses. She is intelligent, can dig potatoes better with her horns than most men with a fork." Our friend thinks a cow with such varied and useful accomplishments and so self-reliant ought to be worth keeping and multiplying, yet her owner always complains there is no money in cattle and wants a bull for nothing to enable him to live. He thinks it is a mere drop in the bucket to offer 30 bulls. There is room for 300 on the ragged edge of the cattle raising district where the scrub cow and scrub breeder can alone feel at home. We shall look up that old description, not at all obsolete, we are sorry to say, and give it in our next issue.

The high price of butter in England, due to the long drouth, attracted attention in many countries and a new claimant for recognition and a place was made from a surprising quarter—Portugal. Several consignments were sent which turned out financially profitable to those making the venture.

Are you furnishing a house or do you want some new furniture? If you do, you should send for the handsome illustrated catalogue just issued by the Scott Furniture Co., Winnipeg. Their business is increasing each year and to accommodate their numerous customers in the country they have issued a large catalogue containing good cuts of all kinds of furniture. These cuts are so plain that one can choose furniture from them almost as well as by seeing it. Prices are given for every article so a person knows just what he is doing. The firm will be pleased to make quotations for furnishing a house on presenting a list of the articles desired, also tell just what the whole thing will cost laid down at your station. They employ a staff of experienced shippers and packers and see that everything is safely packed before being shipped in order to secure safe delivery of the goods in an undamaged condition. Anyone wanting furniture will do well to consult them.

Stonewall.

The enterprising officers of the Rockwood Agricultural Society have purchased a 20-acre lot and have it all fenced. The ground has been broken, will be levelled and seeded so that another year they will have a fine place. It is the intention to lay out a half-mile track and the contract has been let for a hall, 40x160 ft., to cost about \$1,100. It is the intention to use the building as a skating rink during the winter and already an offer has been made for the use of the building that will pay the interest on the investment.

Quite a good showing of horses was made, some very creditable indeed. In heavy horses, A. Scott, J. Scott and A. Mathison had prizes. In general purpose, J. Scott, P. Mollard, J. Wilson, W. J. Bell and W. G. Styles had prizes. S. Scott, T. Scott, J. F. McCulloch, Cameron, McArthur, Hall, A. J. Campbell, R. O. Martin and S. R. Porteous had prizes in the roadster and carriage classes.

A number of Shorthorns were shown. The bulls were shown in fine condition, but quite a few of the females were rather low in condition. J. McOuat got first and diploma for his aged bull, Martin, by Duke of Lyndale. He was also very successful with his female stock and won the herd prize. G. Lang had first for his two-year-old bull; Sam Scott second on a nice white one; McOuat did well with his grades.

Geo. J. Doak, Meadow Lea, showed a nice lot of sheep. S. Scott, Stonewall, showed Berkshires and W. G. Styles, Rosser, a number of nice Yorkshires and a Tamworth sow. He got the diploma for best boar any age.

There was a nice exhibit of poultry, especially the B.P. Rocks, in which J. Stratton won many awards. J. Scott and H. D. Fraser had good prizes. Besides fowl there was a nice exhibit of turkeys, geese and ducks.

The display of grain was larger than last year, wheat especially, J. D. McCulloch winning first for Red Fyfe. Oats were a fine sample; J. Scott won first for the Ogilvie special for milling oats, while a bag of black oats shown by M. Mitchell was much admired.

Vegetables and roots were fine. W. G. Styles showed six turnips that weighed 70 lbs., sound to the core. Dairy products were a very large exhibit and prizes were well spread. T. Scott, A. Mollard, A. Bell, S. R. Porteous, J. Hunter and H. D. Fraser being the chief winners. The display of ladies' work was much admired and so was the bread, first prize being carried off by Mrs. A. Mollard. Balmoral. G. J. Bescoby, Stonewall, showed a few specimens of carving that were well done and much admired. The Manitoba Cream Separator Co. made a nice exhibit of their Mikado separators.

Birtle.

This show on Oct. 10 was to some extent a failure. In the stock classes there were not enough animals to take up the prizes, although some good animals were placed in the ring. In grain and vegetables, S. Larcombe, B. Dutton and J. Brown were leading prize takers. In butter Mrs. Huggins and C. Craig had firsts. In collection of garden flowers S. Larcombe 1st, B. Dutton 2nd.

Baldur.

This, the 8th show of the society, was held on Oct. 5th. The show of horses and cattle was good. A. McQuarry, W.

Cummings and H. Wood had firsts for teams. A. W. Playfair, M. T. Creamer, J. Dale and S. Leslie had honors in horses. In Shorthorns, Creamer, Playfair and Maxwell had most of the honors. About the same for grades. J. Dale had first for red and white wheat. The inside exhibit was satisfactory all through.

Melita.

This show, held on Oct. 6th, had fine weather, good attendance and a capital all round exhibit. In teams of different classes J. Coates, Geo. Sheffer, R. J. Dobbyn and H. Huycke had firsts. In Shorthorns N. W. Crowell, A. P. Sinclair and A. A. Titus had firsts, Titus winning also on herd. For milch cows J. F. Edwards won on herd. J. F. Thompson, J. Williams and J. F. Edwards also taking prizes. In grain N. W. Crowell, J. Pam-mell, R. J. Skelton, J. Williams, J. Drysdale and others made a good showing. For butter Miss Kilkenny, J. Pummell and J. Champion had firsts. Field roots and vegetables were very good and other inside exhibits were also satisfactory. Flowers and ladies' work may be specially mentioned. A number of specials were also awarded and helped to create a lively interest.

Wawanesa.

This fair was held on Oct. 11th, but so far we have only been able to get details of the racing part of the programme. The stock exhibit was a great deal better than last year. There were some fine exhibits in both the horse and cattle classes. In the sheep and swine there was a large exhibit, and some of the produce shown were of a high order. The exhibit of poultry was a fairly large one, there being a couple of Brandon exhibitors. A band from Brandon enlivened the proceedings with excellent music.

Elkhorn.

Held on Oct. 5th. An excellent show, fine weather and large attendance. An excellent exhibit from the Brandon Experimental Farm was placed by Mr. Robey, which was a special attraction. C. Braithwaite showed a large collection of weeds and spoke of their nature. He could find about all the weeds he showed round Elkhorn. The horse classes showed some excellent animals. J. Harry, W. Evans and G. Allison had firsts on teams. A. Struthers, J. S. Jones, W. Moffat, O. M. Lund, C. H. Freeman, J. R. Lynch and J. Harry had other first prizes in horses. In cattle, pure and graded, G. Allison had a full list of winnings, C. D. Rex, W. Lund and J. Jones had firsts.

In sheep G. Allison, J. Jones and J. Lelond had firsts. In pigs J. Harry, F. W. Chapple and J. Evans had good prizes. For Red Fyfe wheat W. Lelond; for White J. D. Johnson had firsts. For collection of grains, J. D. Johnson. In butter there was very full competition, W. Evans, F. W. Chapple, R. Rogers, F. Naylen and J. McClement taking firsts. The rest of the inside collection was well filled up and exhibits as a rule of high quality. The Indian School was an attraction to a great many visitors.

Crystal City.

The 20th show of this society was held at Crystal City on Oct. 11th, and was the most successful fair held in Southern Manitoba this year. The new agricultural grounds presented by the Premier are now in fine shape, and there were 1,400 entries. Horses were in good force, in the two-year-old class eight competitors came forward. In drafts R. J. Stephenson, T. Webb, Robt. Ring, T. C. Preston; in carriage, D. A. McIntyre, D. Watson, F. Collins, and J. S. Cochrane; in roadsters, J. Gibbs, J. Mooney, R. S. Preston, S. Pollock, F. Collins, D. Watson, Miss Tait and Miss Watson all had firsts. Shorthorns were shown by Hon. Thos. Greenway, but not for competition. Jos. Lawrence had all the money prizes except for yearling bull, which went to T. Smallcombe. In Ayrshires D. Watson and J. S. Cochrane had prizes. In Herefords W. Tait took all. For grades Jos. Lawrence, F. Collins and John Greenway had firsts. In sheep Jas. Laidlaw, J. C. Fleming, R. S. Preston, W. L. Trann and T. T. Baird divided the honors. In swine, D. Watson for Berkshires and W. L. Trann for Poland Chinas had about all that was going. The grain exhibit was splendid, over 50 bags being shown, and the quality very choice. H. Elsey had first for best collection, John Greenway second. The rest of the inside show was abundant and of high excellence. Field roots, vegetables, butter, bread, preserves and ladies' work, all in abundance, made a grand display, some ladies taking many prizes. One had 29, another 27. The attendance was excellent, though weather was a little unfavorable. The Greenway herd, though only on grass, was in fine form, and the success of well-fitted animals from this farm at the eastern shows is not to be wondered at.

Russell.

This fair, held on Oct. 4th, was a decided success, the entries numbering 739, of which 133 were horses and 116 cattle. The weather was also fine. The district is noted for good horses and cattle and the sheep and swine were good. In horses G. Cartwright, A. McTavish and D. T.



THE LOSS OF AN EYE—terrible calamity. The tip of a horn often does it in tying up cattle. Cut off the horns quickly and humanely with the **Keystone DEHORNING Knife**. Cuts on four sides noncrushing or tearing. Highest Award World's Fair. FULLY GUARANTEED. Write for descriptive circulars, prices, etc. **KEYSTONE DEHORNING CO., PICTON, ONT.**

"PASTEUR" BLACKLEG VACCINE.

The original, genuine and successful vaccine remedy for Blackleg. In powder form—"Single" Application, \$1.50 per packet (10 to 12 head); "Double" Application, \$2 per double packet (10 to 20 head). Also

"BLACKLEGINE"—Single Application Vaccine—ready for immediate use:—10 head, \$1.50; 20 head, \$2.50; 50 head, \$6.

Beware of substitutes for and imitations of our well-known "Pasteur" Vaccines.

WRITE FOR PROOFS OF SUCCESS DURING THE LAST FOUR YEARS.

PASTEUR VACCINE CO.,
56 Fifth Avenue, Chicago.

W. J. MITCHELL & CO.,
Winnipeg, Man.

Wilson were winners in the order named of first prizes. In cattle J. Dugan had first for bull any age bred in the county of Russell, and other prizes; Bennie Bros., H. Smith and W. Keating took leading honors. In dairy stock Messrs. J. H. Farthing and H. Smith won. For grade stock Messrs. Albright stood very high, J. Dugan and H. Smith following. In sheep Messrs. Rea, J. H. Paterson and the Barnardo Home led. Grain was excellent, Messrs. Paterson, Rea, Callin and Moore winning. For dairy produce Messdames Paterson, Callin and Leavens and Messrs. T. C. Gerrard, T. Clements and B. Dutton had prizes. There was a capital display of roots, vegetables, ladies' work and fine arts. A good display was also made by the leading merchants of the town.

Carman.

This fair, held on Oct. 5th and 6th, was as usual of high quality, but limited in quantity. Horses were few but very good. A. Morrison had the \$25 prize for heavy draft team. J. P. Garnett had a fine two-year-old filly, up to 1,370 lbs. Other leading winners were Usher Bros., P. Campbell, Marshall & Crummer, W. Hardy, S. McClain and W. H. Nisbett. For single drivers W. Hardy and W. D. B. Boyd in Shorthorns, A. Graham, Pomeroy, made a great turnout, taking 14 prizes. A. Morrison, J. W. Johnston, and A. McNaughton had prizes. In Ayrshires W. Hardy swept the decks, as did W. H. Elford in grades and beef cattle. In sheep J. B. Jickling and M. Huston had about all the prizes. In Berkshires M. E. Demills led, A. Graham second; in Yorkshires, A. Graham led, Hardy second; in Poland Chinas, A. McNaughton had the lead. In grain the honors were widely distributed. T. Hardy had first on Red Fyfe. In butter R. J. Pritchard, M. McGregor and Miss Wilkie had firsts. Field and garden produce of all sorts are here very choice, J. W. Johnston and F. Watson taking a good share of prizes all through. A. Morrison, W. Harrison, Mrs. Begg, W. H. Elford, A. Graham and J. Morcom had other prizes in this department. There was a large display of domestic manufactures and ladies' work, all of fine quality and keenly contested. The attendance was large.

Kildonan and St. Pauls.

This society was blessed this year with two fine days for their show and on the whole it was a great success. Though a busy time the attendance was large and everybody enjoyed themselves. The exhibit of horses was very good and awards were satisfactorily placed by Dr. F. Torrance, Winnipeg. The contest for the best drawing team created a great deal of interest. Quite a number of nice single drivers were shown. There were some very useful farm horses shown and rather too many that are not subject to strict classification. Messrs. McIvor, Sperrin and the Indian School got deserved honors in drafts.

Cattle made a very fine showing. The herd of W. S. Lister, Middlechurch, was missed this year, but Mr. Lister does not think it fair that he should come out every year and run away with the lion's share of the prizes, so stays at home every now and then to give the "other fellows" a chance. H. O. Ayearst, Middlechurch, had out a nice lot of pure-bred Shorthorns and secured the most of the awards. His first prize bull calf was an extra good one by Gravesend's Heir. R. R. Taylor had in a bull of Foley's breeding, the best bull any age, and won the Cattle

Breeders' diploma. In the dairy breeds J. Oughton's Holsteins had to compete with Rice's and Garvin's Ayrshires. This is always more or less unsatisfactory. Oughton had the lead all the way through, frequently taking second place as well. Both Rice and Garvin showed Ayrshires, but while in good condition, the judge seemed to think them undersized. In grade cattle the classes were filled and competition was sharp. H. C. Whellams had the best aged cow and Ayearst, Taylor, J. H. Gunn and S. R. Henderson had good prizes.

In sheep John Oughton showed his Shropshires and M. Oughton his Cotswolds, and as there was only one class for both they had to compete against each other and the Shropshires had rather the best of it.

In pigs all pure breeds competed together, first prize aged boar was Taylor's Tamworth and second M. Oughton's Poland China, but later the latter was awarded the diploma offered by the Sheep and Swine Breeders' Association. J. Oughton showed Berkshires and won with them.

Poultry made an exhibit fully three times larger than ever seen before at the show. Chas. Midwinter had out a fine lot, winning on Houdans, Minorcas, Toulouse geese and goslings, Bronze turkeys, ducks and pigeons. G. Wood also had out a good showing of his choice birds and won on Black Spanish, White Wyandottes, Leghorns, B.P. Rocks and others. Jos. Wilding, Norwood Bridge, showed a few birds and won for Houdans, Minorcas, turkeys and ducks.

Grain was very good. H. O. Ayearst had most of the prizes. In farm roots the red tickets went mainly to R. R. Taylor for splendid specimens. Field and garden produce was as usual abundant and of the very best. Keen competition the rule and honors well divided.

Domestic produce—butter, bread and preserves were very good, the McIvor family leading. The ladies' work was all new and much of it of special quality, both in design and execution. The specimens from the Indian School were very creditable indeed—both to teachers and pupils.

The R. A. Lister Co. showed their Alexandra separators and the Manitoba Cream Separator Co. their Mikado separator.

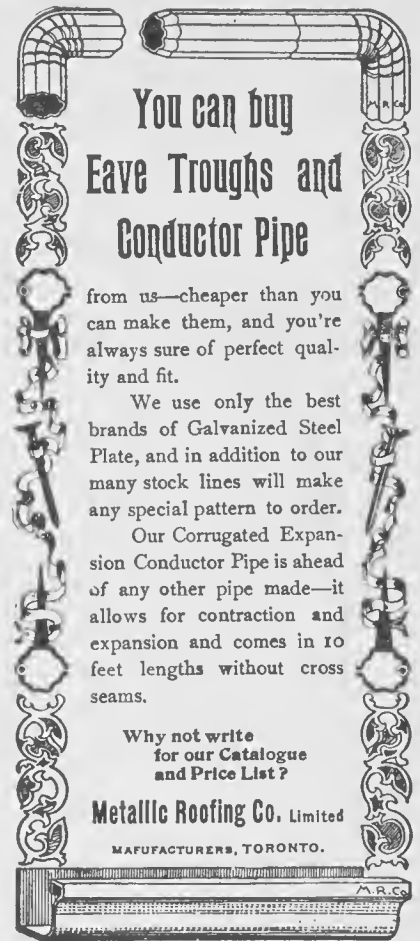
Cartwright.

Held on Oct. 4th. Besides the show a political round-up was held. The quality of exhibits good, but not so numerous as last year. In teams A. M. Waldie, John Wallace, C. Manning and J. Mooney had firsts. In Shorthorns J. Stancombe and W. Waldie; in Herefords J. Wallace had most of the awards. In butter Mrs. Stancombe had most prizes, Mrs. Waldie next.

Holland.

This fair had fine weather, but stock was not so abundant as in previous years. Some very fine poultry were shown. Roots and vegetables were excellent. Ladies' work and a fine display by the merchants of the town helped to make up an excellent inside show and the attendance was large.

W. Nevins, Glenboro, had a fine pair of Thoroughbreds, and Mr. Hiebert a good carriage team. Isaac Moore had most honors in Shorthorns, D. Mawhinney following. D. J. Corbett had fine sheep. Many good birds were shown. J. Longmore had most prizes. Butter limited in quantity, but very good.



**You can buy
Eave Troughs and
Conductor Pipe**

from us—cheaper than you can make them, and you're always sure of perfect quality and fit.

We use only the best brands of Galvanized Steel Plate, and in addition to our many stock lines will make any special pattern to order.

Our Corrugated Expansion Conductor Pipe is ahead of any other pipe made—it allows for contraction and expansion and comes in 10 feet lengths without cross seams.

Why not write for our Catalogue and Price List?

Metallic Roofing Co. Limited
MANUFACTURERS, TORONTO.

THOMAS BLACK, SELLING AGENT, WINNIPEG.



**LITTLE'S
PATENT FLUID
NON-POISONOUS
SHEEP DIP
AND CATTLE WASH.**

The Original Non-Poisonous Fluid Dip

Still the Favorite Dip, as proved by the testimony of our Minister of Agriculture and other large Breeders.

FOR SHEEP.

Kills Ticks, Maggots; Cures Scabs, Heals Old Sores, Wounds, etc., and greatly increases and improves growth of Wool.

CATTLE, HORSES, PIGS, Etc.

Cleanses the skin from all insects, and makes the coat beautifully soft and glossy.

Prevents the attack of Warble Fly.

Heals Saddle Galls, Sore Shoulders
Ulcers, etc. Keeps Animals Free
from Infection.

NO DANGER, SAFE, CHEAP AND EFFECTIVE.

BEWARE OF IMITATIONS.

Sold in large tins at 75 Cents. Sufficient in each to make from 25 to 40 gallons of wash, according to strength required. Special terms to Breeders, Ranchmen, and others requiring large quantities.

**SOLD BY ALL DRUGGISTS.
SEND FOR PAMPHLET.**

ROBERT WIGHTMAN, Druggist, Owen Sound.

Sole Agent for the Dominion.

1874

Deloraine.

This fair, held on the 5th of October, had fine weather and a good attendance, but the stock classes were rather thinly filled. The inside show was very good. For the first time since 1882 the veteran president, John Renton, was absent through illness. In draft horses Ledingham, Whittan, W. Perry and C. Johnston had firsts. In light horses Whitlaw, Hoskins, Ross, Huycke, Russell and W. A. Johnson had firsts. In Shorthorns W. Perry had herd and Ross, G. Perry and W. Perry had firsts. In grades the Perrys, Thompson and Ross led. These were a good lot all through. In pigs Thompson and Stevens had all prizes, nearly all going to Thompson. In wheat a special for 12 bus. Red Fyfe went to W. A. Johnson, C. A. Young second. In butter Tomsett, Thompson, Hartrey and Smith were prizetakers.

Medicine Hat.

The 13th show of this society was held here on the 6th Oct. There was a smaller display than usual. In horses W. J. Shannon, H. Gobbett, A. B. Carle, W. Shannon and C. Cooper had firsts. J. Hargrave had all the cattle prizes. In pigs W. Houghton and J. H. Bray got firsts. Wheat and oats, D. Cavan first. Special by the Department of Agriculture for wheat, W. Houghton; oats, D. Cavan. The wheat is said to weigh 68 lbs. Butter, Mrs. Littleford got two firsts. There was a full display of ladies' work and vegetables.

Maple Creek.

This fair was held on Sept. 29th. Owing to press of home work the display of stock was limited as was also the attendance of visitors. Shorthorns made a good display, Messrs. Fanquier, Dixon, and Greely were successful exhibitors. Mr. Fanquier showed Herefords. In grades Messrs. Hassett, Dixon and Loban led. R. H. Kells had most prizes in grain and vegetables. Other winners were Messrs. Greely, Fanquier, Stewart and Dixon. Butter a splendid show. Mesdames Cumberland, Elliot and Hassett being first prize takers. Mr. Fanquier showed 10 pails from two pounds seed of Commercial potato. The general and domestic exhibits were both very good.

Fort Saskatchewan.

This fair was held on Sept. 29th. There was a good deal of money going for trotting, but sport is in request in the far northwest and must be attended to. The show of horses was good, of cattle poor. The field and garden produce was full of interest and we quote a few samples. W. Wakeford, Clover Bar, showed a cabbage 49 inches in circumference stripped of all loose leaves; cauliflower 31 inches around; parsnips 12 inches around and 17 inches long; Beauty of Hebron potatoes 8½ inches long and 12 inches around; squash 31 inches around; vegetable marrow 19 inches long and 18 inches around. J. Alton, Agricola, showed half long carrots 22 inches long and 10 inches around; turnip beet 18 inches around; mangold 23 inches long and 16 inches around; parsnip 20 inches long and 11 inches around; swede turnip 35 inches around and weighing 21 pounds. John Hemley, a pumpkin 34 inches around by 18 inches long, another pumpkin 37 inches around; and beets 20 inches around. T. J. Carscaden, Fort Saskatchewan, white turnip 37 inches

around. Other vegetables measured—Cauliflower 32 inches; white carrot 23 inches long by 10 inches around; potato 19 inches by 11 inches around. The samples of threshed grain were very good, particularly in wheat and peas. H. Lambert, Fort Saskatchewan, north, showed fall sown wheat sown on October 25th and cut on August 22nd. Ripe peas were shown on straw 9ft. long. Butter, preserves and ladies' work were excellent.

Whitewood.

This show was better than that of last year; still stock was not in great force. A. B. Potter, Montgomery, showed his Holsteins and pigs, taking many prizes and sold a bull calf. Grain, roots and vegetables were extra good. The attendance was very large.

Cannington Manor.

The 12th annual show of this society was held on Sept. 29th. It was an unprecedented success, with 1,000 entries. Horses and cattle good and the prizes well distributed. Messrs. Clements had most of the grain prizes. A splendid collection of ladies' work was shown.

Gilbert Plains.

This show was held at the schoolroom, which overflowed with the display of vegetables and other inside exhibits. Horses and cattle extra good and a full turnout.

Meadow Lea.

This fair was held on Sept. 27th. The entries were over 1,000, but it was held on a very bad day. The stock was good but shown at great disadvantage. Dairy produce is always first-class here. Vegetables very fine. Grain and other inside produce were all very good.

Westbourne.

The Westbourne Agricultural Society held their annual fall show at Gladstone, Oct. 5th. It was a delightful day, but so fine that many of the threshing gangs did not stop work, yet there was a fair attendance. Horses and cattle were up to the quality of other years. Vegetables unequal in quality, potatoes extra good. The inside show as a whole satisfactory. A concert was given in the evening.

Hartney.

This fair, held on Oct. 5th and 6th, was a decided success. John Simmonds had an extra good heavy draft team; J. Aikenhead and H. Jones also had prizes. Shorthorns made a capital showing, R. L. Lang, Oak Lake, scooping most of the prizes. W. Laughland and Jas. Duthie had good ones. J. E. Marples, Deleau, had a grand bunch of Herefords, taking all prizes. Some choice grades were shown. R. L. Lang and J. T. Dunbow showed capital Berks. R. I. Crisp judged cattle, sheep and swine to great satisfaction. W. Laughland had a splendid exhibit of grains and grasses, getting first on White and Red Fyfe, white and black oats, barley and peas. Vegetables were of choice quality. Laughland and A. S. Thomas, of Lauder, had many prizes. Butter a moderate display. Ladies' work a large and fine display.

Owing to a snowfall in Northern Alberta on the dates appointed, the fairs to have taken place at Lacombe on the 10th inst. and at Red Deer on the 11th and 12th, were not held. Red Deer will not have any fair this year.

The Carman Standard says: From four bags of spelts sown on light, sandy soil, Dan Mills obtained 400 bushels, weighing 38 pounds to the bushel. This is an exceedingly heavy crop. Spelts make good feed for horses or cattle, and can be grown on very poor soil. Parties wanting to try it can obtain seed from Mills at \$1 per bushel.

YOU CAN'T DO BETTER
THAN BUY AN

Oxford Regent

FOR YOUR KITCHEN.



It is a specially fine, quick-working Range, and may be fitted to burn hard coal, soft coal, or wood—whichever you wish. The low price and splendid construction offer you advantages that you'll appreciate every day for a lifetime. Ask your dealer to show you the "Regent." If he has none in stock, write us for full information.

THE GURNEY FOUNDRY CO., Limited, WINNIPEG,
155 & 157 LOMBARD STREET.



Autumn Thoughts.

How richly Nature tints the woods
With deep autumnal dyes!
So touch our souls, O God of Love,
Till warmer glows arise.

She waves the plumed golden-rod
By wayside, hill and field;
So o'er our hearts thy sceptre, Lord,
As royal sovereign wield.

The sumachs burst in crimson flame,
Blazing the woodhens creep;
So may thy watch-fires greet us, Lord,
Brightest when night is deep.

The apple tree, with laden boughs,
Their ruddy offerings bring;
So in our souls, as life grows old,
May full fruition spring.

The squirrel stores his nutty hoard
'Gainst winter, long and cold;
So may we lay up treasures, Lord,
Safe in thy Master's fold.

The gleaners follow the reaper's step,
Till the last bright sheaf is won;
So may we glean in thy harvest, Lord,
Following Jesus on!

—Mary J. Skidmore.

Weeds in Towns.

In the matter of prompt handling of the weed trouble perhaps the town of Lethbridge bears off the palm. Territorial Weed Inspector Willing recently visited that place and drew attention to the weeds which it contained. Action was immediately taken and inside one or two days posters were issued warning the people to exterminate their weeds or be prepared to have the ordinance enforced. Whether or not the authorities have carried on the work as vigorously as it was started we do not know. In very many places the towns are the biggest sinners in allowing weeds to get a good foothold and spread through the country. Quite frequently patches can be seen which have been imported in different ways and which have got on to the streets and into the yards and gardens. Every farmer should especially make it his business to see that any small patches of new weeds about towns are exterminated.

Losses From Hail.

This has proved one of the lightest years for losses by hail known in the province of Manitoba. It is surprising to learn how limited is the amount of insurance that is taken in a country like this where hail is liable to come any moment and almost any place. Not over 125,000 acres has this year been insured in the Provincial Insurance Society, and it is gratifying to learn that their total loss for the season was only \$11,000. It is assumed that in the rival society there was not much short of \$150,000 worth of insurance and their losses about \$25,000. This is a very light loss on the area covered, and certainly a good deal below the usual average of loss.

It is not safe to rely on newspaper reports on such matters, but Farm Implementers, a usually well informed paper, reports that in one very severe storm on the upper Red River there was more or less damage done to 150,000 acres of wheat. Another was reckoned at 40,000, and there were smaller ones besides. These happened in closely cultivated counties that were prosperous enough to afford some amount of loss, though individuals were

ruinously affected. Certainly Manitoba has escaped much more easily than did the great wheat growing counties south of us.

Elevator Commission.

The members of the royal commission appointed by the governor-general-in-council to inquire into and report upon certain alleged irregularities which are claimed to exist in the shipping and transportation of grain from Manitoba and the Northwest Territories hereby give notice that they will attend at the following places and times for the purpose of hearing evidence from all persons who wish to give evidence on the subject of such irregularities or any matter connected therewith:—

Edmonton, Sat., Oct. 21, 10 a.m.
Moose Jaw, Wed., Oct. 25, 10 a.m.
Indian Head, Thurs., Oct. 26, 10 a.m.
Moosomin, Friday, Oct. 27, 10 a.m.
Virden, Saturday, Oct. 28, 10 a.m.
Morden, Tuesday, Oct. 31, 3 p.m.
Cartwright, Thursday, Nov. 2, 10 a.m.
Boissevain, Friday, Nov. 3, 10 a.m.
Melita, Saturday, Nov. 4, 10 a.m.
Pipestone, Monday, Nov. 6, 1 p.m.
Methven, Tuesday, Nov. 7, 10 a.m.
Treherne, Wednesday, Nov. 8, 1 p.m.
Neepawa, Tuesday, Nov. 14, 2 p.m.
P. la Prairie, Wed., Nov. 15, 2 p.m.
Brandon, Friday, Nov. 17, 10 a.m.
Forrest, Monday, Nov. 20, 9 a.m.
Baldur, Tuesday, Nov. 21, 1 p.m.
Emerson, Friday, Nov. 24, 9 a.m.

Sittings will be held at Dauphin, Winnipeg and Fort William subsequent to the above at dates to be announced.

"The grievances particularly referred to in said commission as being said to exist, are:—

"1st—That the vendor of grain is at present subjected to unfair and excessive dockage of grain at the time of sale.

"2nd—That doubts exist as to the fairness of the weights allowed or used by owners of elevators.

"3rd—That the owners of elevators enjoy a monopoly in the purchase of grain by refusing to permit the erection of flat warehouses where standard elevators are situated, and are able to keep grain below its true market value, to their own benefit and the disadvantage of others, who are specially interested in the grain trade and the public generally.

"The members of the commission desire to hear evidence in reference to the existence of these grievances, and the mode of remedying them, if found to exist, and upon any other grievances or subjects connected with the said grain trade; and for that purpose call upon all persons interested in said matters, and who have evidence to give in respect of that, to attend at the places and times above mentioned, when the fullest opportunity will be given to them to state what they know on the said subjects.

Dated Oct. 16, A.D. 1899."

(Signed) E. J. Senkler, chairman; W. F. Sirrett, W. Lothian, Chas. C. Castle, commissioners.

We trust the farmers will take advantage of these meetings, by furnishing the commission with the fullest and most convincing evidence at their command.

A curious accident happened at Boissevain to a threshing gang. The frugal housewife appears to have put arsenic in the tea instead of soda to make it "draw" and it drew to good purpose. Everybody was sick and emetics were administered, but that sort of tea does not refresh harvest men and the day's record was not in evidence.

Central Saskatchewan Fair.

The fall fair was held on Sept. 28th and 29th at Saskatoon. In some lines the exhibit was not so good as usual, owing to a late harvest. They had good weather. The prize winners were as follows: Jos. Fletcher in draft team; J. W. Clark, T. Clark, W. R. Tucker and Jos. Caswell in general purpose horses; J. R. Wilson, G. A. Doane, D. S. Taylor, D. Caswell, H. Pendygrasse, and W. Cherry in carriage and saddle horses. Trotting team, J. W. Clark and Jos. Caswell; single trotter, J. R. Wilson. In Shorthorn cattle, D. Lusk took prizes on bull over two years and a special for bull any age given by the Pure Bred Cattle Breeders' Association. The other winners were T. Copland, Jos. Caswell and Jno. Caswell. In grade cattle, T. Copland, Jos. Caswell, Jno. Caswell and T. Griffith. E. S. Andrews took all the awards in sheep. In pigs T. Copland, E. S. Andrews, W. Cherry and T. Griffith won prizes. The special prize for boar, given by the Pure Bred Sheep and Swine Breeders' Association, was awarded to E. S. Andrews. In grain Jos. Caswell and J. W. Clark, for wheat; J. Fletcher and Jos. Biernes, for oats. The Northwest Government prizes for wheat and oats went to Jos. Fletcher and Jos. Biernes. There was only a moderate showing of field roots and garden produce, but all shown was of good quality. Jno. Caswell and T. Griffith won on roll butter and J. D. Powe and Jos. Caswell on packed butter. The ladies had only a small amount of fancy work on exhibit and it was nearly all of extra good quality. Our correspondent adds: It is hoped that the Northwest Government will send in judges on horses and cattle to all fairs, as much of the jangling will be done away with if they do.

C. C. Travis, lately station agent of the C.P.R., has leased the Elkhorn Roller Mills and had them overhauled and put in first-class condition, with A. B. Clifford as head miller.

A sample of fall wheat grown by Chas. Kettle, of Pincher Creek, has been exhibited in Calgary by J. D. O'Neil. The sample consisted of 438 grains of A1 wheat, the product of 12 heads.

An international agricultural congress will be held at Paris in 1900 to discuss subjects in which every farming country can feel a mutual interest, such as agricultural education, science, experiments, crop parasites, etc.

Burnside has had a serious outbreak of typhoid fever. This is the season when limited water supply from old wells gets in its deadly work and too much pains cannot be taken to make sure that the well water used is free from disease germs.

A painter once said he mixed his paints with brains. So to get the best results in the dairy cream must be ripened with brains. If cream of different skimmings is not well mixed before being ripened, all the butter will not be taken out of it when it is churned.

A. J. Cotton, of Treherne, has this year had his usual success as a grain grower. He has finished the threshing of his grain and has in the neighborhood of 19,000 bushels of wheat, 27 bushels to the acre all round, and a 30-acre field of oats yielded 108 bushels per acre.

The world is losing faith in the evil eye and witches and some other things that scared our good old forefathers. But we firmly believe that it is very bad for farm machinery to be out too long where the man in the moon has a chance to see them. Either sun or moon is a bad friend to any sort of farm machinery and the wisest course is to keep such things out of their sight.

"As Others See Us."

The immigration department has excellent exhibits of the products of our prairies at many of the larger state shows in the United States. These exhibits have attracted a great deal of interest as well as favorable comment. The following, from the Daily News, of Toledo, Ohio, is rather "puffy" in style, but is still quite true in its main testimony:—

"One of the principal features" of the Tri-State Fair in progress there, "is the fine, large exhibit of Western Canada products. This is one of the largest exhibits of the cereal product ever put before the citizens of Ohio by any country, and thousands of people are viewing the display daily. The exhibit consists of both grain in sheaf and grain threshed. The News noticed in particular the Red Fyie wheat that took first premium at the World's Fair. There are also samples of oats, barley and wheat that made the Ohio farmers envy the lot of their brothers in the west. The samples of the native grasses, of which there are some 60 different varieties, prove to us the value of this great feed for the many stock-raisers of that country, which has no equal for its fine and sweet meat. We have been informed on good authority that there are former Ohio and Michigan farmers now residing in that country that are making large shipments of stock to the east. A large number of Ohio citizens are taking advantage of the opportunities offered and are securing these fine homesteads, and it is rapidly developing into one of the finest farming countries in the world. Altogether the exhibit is tastefully gotten up, and is a credit to our neighbors, and we have no hesitation in congratulating them in bringing before our people the advantages of such a productive country. We are great believers in the great future of Western Canada, and we advise the young men who are looking for homes and a future to visit that glorious country, where there is health, also wealth, and plenty of it."

Kipling on Handling Wheat at Buffalo.

"It was my felicity," writes Rudyard Kipling in his American Notes, to catch a grain steamer and an elevator emptying that same steamer. The steamer might have been 2,000 tons burden. She was laden with wheat in bulk; from stern to stern, thirteen feet deep, lay the clean, red wheat. There was no 25 per cent. dirt admixture about it at all. It was wheat fit for the grindstones as it lay. They manoeuvred the fore-hatch of that steamer directly under an elevator, a house of red tin a hundred and fifty feet high. Then they let down into that fore-hatch a trunk as if it had been the trunk of an elephant, but stiff because it was a pipe of iron-clamped wood. And the trunk had a steel-shod nose to it and contained an endless chain of steel buckets.

"Then the captain swore, raising his eyes to heaven, and a gruff voice answered him from the place he swore at, and certain machinery, also in the firmament, began to clack, and the glittering, steel-shod nose of that trunk burrowed into the wheat and the wheat quivered and sunk upon the instant as water sinks when the siphon sucks, because the steel buckets were flying upon their endless round, carrying away each its appointed morsel of wheat.

"The wheat sunk into the fore-hatch while a man looked—sunk till the brown timbers of the bulkheads showed bare and men leaped down through clouds of golden dust and shovelled the wheat furiously round the nose of the trunk, and

got a steam shovel of glittering steel and made that shovel also, till there remained of the grain not more than a horse leaves in the fold of his nose-bag.

"In this manner do they handle wheat at Buffalo."

It is likely that plows will cost the farmer more next season than they can be bought for now. The extraordinary increase in the price of iron and steel has compelled manufacturers to think about raising prices. It is stated that the material per plow had advanced at least \$1.50 lately.

The farmers of Pembina Country, Dakota, are disappointed in the yield; the highest being 20 bushels, while the majority runs from 12 to 18 bushels of wheat, some of the summer fallow is yielding not more than 8 to 12 bushels and that not of a very good quality. In oats the yield is good.

In giving the names of the members of the Survey Board on page 692, in connection with the new Grain Inspection Act, the name of Henry Buell was given as a nominee of the Territorial Government; it should have been Henry Dorell. Those appointed by the Territorial Government are: W. R. Motherwell, Abernethy; H. Dorell, Moose Jaw; and R. J. Phin, Moosomin.

C. Robertson, Hartney, lost a separator recently by fire. The Farmer is sorry to learn this, especially as the machine was not insured. It was at work on the farm of E. Nixon, five miles east of Hartney, and when the crew knocked off work everything appeared to be all right. As there was no wind it is a mystery how the fire originated. We would again call attention of threshers to the advisability of pulling the separator away from stacks when quitting work for the night.

Barber is also to have two elevators. Trackend already has one and a general store is likely to be located there. This will cut up the business and some one will have to go to the wall. We do not begrudge our neighbors the accommodation they will get, but we think very little of the astuteness of a government that allows a railway company to destroy a town ten years established and when hundreds of thousands of dollars have been invested, simply to build up villages on their own line.—Hartney Star.

W. R. Motherwell, of Abernethy, Assa., has for years been one of the most successful growers of Brome grass in the west and will this year have about 400 lbs. of seed to the acre, from 35 acres under crop. Other farmers in the same district are giving attention to the same crop, which at present prices is about the most profitable any man can try. Mr. Motherwell's experience is adverse to thick seeding, which leads to a too thick bottom the first year and prevents free growth. In his opinion 10 lbs. is enough to start with if the seed is sound. Thin spots soon fill up if the land is at all good.

Moose Jaw has for some years been wanting a flour mill, but failed to come to terms with suitable men. Now a local firm offers to build a 50-barrel mill on somewhat original terms. Their proposition is to build a mill if exemption from taxation is granted for 20 years, and the people of the district subscribe \$10,000 to be paid back without interest by gristing local wheat. Mr. Simpson, who makes the proposal, figures out that a farmer who takes his grist to the nearest mill (at Regina) would save money enough by paying him 30c. per 100 for gristing to make the local mill on such terms a profitable scheme. The Agricultural Society endorses this scheme.

Never wait for a thing to turn up. Go turn it up yourself. It takes less time and is surer to be done.

What was probably the largest load of wheat ever brought into Griswold on a wagon by a single team of horses, says the Ledger, was unloaded here to-day at Ogilvie's elevator. The grain and team which delivered it were the property of W. J. Good. The load contained 135 bus.—8,100 lbs.—and was hauled from the farm, a distance of four and a half miles, over some stiff grades and up to the approach of the elevator, apparently without any trouble. The driver says the team can handle 150 bushels over the same route.

"LAP-SEAL" IMPROVED ASBESTOS ROOFING

Is Reliable, Durable
and Economical.

"LAP-SEAL" IMPROVED ASBESTOS ROOFING, price per square, complete \$4.50
With each square of roofing we furnish 1½ gals. of "Lap-Seal" Roof Coating and 1 lb. of nails.

"GIANT" ASBESTOS ROOFING, 3 ply, price per square, complete \$3.50

We furnish with this roofing the same Red Asbestos Coating as with our "Lap-Seal" roofing, which adds greatly to its wearing qualities. It is put up in rolls of 108 square feet, 32 in. wide, enough to cover one square 10 x 10 feet. Each square includes 1 lb. of nails and 1½ lb. tin caps.

"BLACK JACK" ROOFING, 3 ply, price per square, complete \$3.00

We furnish with it 2 gals. per square of our Asbestos Roof Coating (black), 1 lb. of nails and 1½ lb. of tin caps.

STEAM PIPE AND BOILER COVERINGS, CHICAGO AIR CELL ASBESTOS, BRINE PIPE COVERINGS, ASBESTOS COOBS—ALL KINDS, MINERAL AND ALUMINUM WOOL, HAIR FELT, ETC.

Galvanic Varnish THE GREAT RUST PREVENTIVE PAINT

Liberal Discounts to large buyers.

ROBT. BLACK, 131 BANNATYNE ST. WINNIPEG.

Newly Furnished throughout. All Modern Conveniences. Most centrally located Hotel in the Business part of the City.

DAVID W. BEAUBIER, PROPRIETOR.

The Palace Hotel

UNDER NEW MANAGEMENT.

Accommodating Porter meets all Trains.

Open Day and Night.

Good Stabling in connection.

Rates \$1.00 per day.

EIGHTH STREET, BRANDON, MAN.

NEAR ROSSER AVE.

USE THE ALL-WOOL AND ONLY GENUINE

MICA FELTING

offered to you for roofs or siding. Impervious to water; affected neither by heat nor frost, fire-proof; easily put on. Seven years' experience have proved its staying quality. Grand testimonials from all quarters. Enamel paint for preserving tin and shingles. Guaranteed. Send for sample and price. Don't forget stamp.

1788 W. C. FONSECA, 705 Main St., Winnipeg.

NOTICE.

If you become a member of The United States Co-operative Boot and Shoe Purchasing Association you can save 33½ per cent. on all boots and shoes you buy for yourself and family. For instructions how to join the Association, full information concerning it, and illustrated book on shoes, send your address and 10 cents to

E. H. TILTON, Secretary,
105 Summer St. Boston, Mass.

Institute Meetings in Alberta.

As previously announced through these columns, a series of Farmers' Institute meetings were held in Northern Alberta. The speakers were Hon. G. H. V. Bulyea, Commissioner of Agriculture; Supt. A. Mackay, of the Experimental Farm; Dairy Commissioner C. Marker; Noxious Weeds Inspector T. N. Willing; and W. Trant, Secretary Regina Agricultural Society.

The unusual lateness of the season and consequent crowding of farm work, has interfered with the full attendance of farmers. Taken altogether, however, the manifest interest and attendance has, considering the circumstances, been gratifying. At Red Deer there was a goodly number in town at the advertised hour (2 p.m., Sept. 29th), but as the train did not arrive till after 5 o'clock, a great many went home, but sufficient remained to have a very fair evening meeting. At Lacombe there were not so many as could have been desired, but the Wetaskiwin attendance was good, about 50 or 60 farmers being present.

The addresses were largely along the same line at each point, with, of course, variation according to local circumstances. Mr. Bulyea largely confined himself to an explanation of the workings of the law in regard to Agricultural Societies, explaining the recent changes in the law affecting them and already outlined in our issue of Sept. 5th, p. 650.

Considerable discussion as to the working and effects of the new legislation took place, but there seemed to be pretty general satisfaction with the law when fully explained. At Red Deer a request was made for an experimental farm for Northern Alberta. Mr. Bulyea stated that while there was no likelihood of a Dominion Experimental Farm for some time, the time might not be so far distant when good illustration stations would be found in both Saskatchewan and Northern Alberta.

Mr. Mackay dealt to more or less extent with the objects and workings of the Experimental Farm at Indian Head. He spoke of the worth of a number of the lessons learned as applied to Assiniboia, but recognized that the conditions in Alberta were in some respects different, and while a great many of the same methods would be found workable and valuable, there would, no doubt, be some minor differences. He spoke of the distribution of grains, seeds and plants for testing amongst the farmers, and strongly encouraged the people in this part to go into careful experimental tests for themselves. In fact, he was willing to lend his utmost assistance to this line of work in this district. This department of his work had alone assumed such magnitude as to entail a large annual expenditure in postage in carrying it on, and while there were cases where the receiver had taken no pains with samples sent him, it had been the means of spreading good seed and plants to thousands of others, who had profited immensely thereby. One point he emphasized—he did not want to send out one sample to anyone who would not give it cultivation and care.

Another point was that only such specimens as could be raised on the Experimental Farm would be sent out. He often received requests for vegetable seeds, but as these, with the exception perhaps of onions, cabbages and rhubarb, were not raised, the requests could not be granted. However, he was willing to give information as to the best kinds. He said that often all available samples in many lines were taken before the new year, and advised early application. In the matter of different methods of cultivation, many valuable lessons had been learned. He very strongly advised the farmers to go in for

systematic fallowing as soon as possible. A number of years ago he had maintained that this method would mean the salvation of this country. This was not at that time generally accepted, but is extensively practiced and good results stand now as an evidence of its worth. He recognized that this season had been an unusual one in Alberta, and hoped that the like would not too often occur, as, while it is possible to manage dry seasons properly, it was well nigh impossible to get good satisfaction out of one so wet. He outlined the advantages of a fallow, showing how it conduced to the preservation of moisture, killing of weeds, earlier seeding, and larger crops. On the Experimental Farm he had never lost a crop in the last 12 years, which had been sown on fallow within three weeks after the opening of spring. The fallow should be plowed the last of May or June (preferably May), plowing pretty deep and surface cultivating from that on for the rest of the season in such a way as to keep down all weeds. If weeds were allowed to mature, as sometimes takes place on the fallow, the process only means a seeding instead of a cleaning. Once in a while he thought it advisable to put the plow in say 8 or 10 inches. For the past five years it had been found that wheat, oats and barley had taken nine, five and four days respectively longer to mature on fallow than on fall plowing. This objection was more than counterbalanced in the earlier seeding.

Experience had proven that the best wheat had been grown from seed sown during the second week after the season opened. That sown the fifth week had invariably been lost. The average length of time required for Red Fyfe wheat to mature was about 125 days after germinating. Oats had taken from 99 to 111 days and he thought they might be considered pretty safe to harvest up to August 20th. The best results from oats had been obtained by sowing from the 1st to 5th of May, and barley from 5th to 15th of same month. In fallowing too much emphasis could not be laid upon plowing before the weeds had grown too strong and robbed the soil of a great deal of its moisture. In seasons such as this one in Alberta, he would recommend as much fall plowing as possible. The matter of plowing green crops for manuring purposes was on test, but as yet not very much was known definitely as to results.

On the matter of using good sound, strong seed, too much stress could not be laid. He recommended the use of a fan-

ning mill just as soon as one could be obtained. The results from sowing inferior and light seed were slower germination and weaker, slower growing plants. Frozen wheat would grow unless so badly frosted as to be useless for millers, but it was apt to have the faults already mentioned. Seed oats were more easily affected by frost, and the probability was that a quantity of them this year would be injured for good seed.

Smutty wheat, if otherwise all right, was good enough seed, if properly bluestoned. This year a specimen of smutty seed was sown which was so bad that only about one head out of ten of the crop grown was any good, but at the same time exactly the same seed bluestoned was yielding 35 or 40 bushels to the acre. One pound of bluestone to five bushels of wheat was about right, and dipping was better than sprinkling unless the latter is very thoroughly done. Formalin for oat smut was something which, though used a good deal this year in Manitoba and Eastern Assiniboia, was very little used in Alberta. It had given the very best of results. One pound of formalin, costing about 75 cents, was sufficient to treat 50 bushels of seed. Four ounces should be used in ten gallons of water and the grain steeped about ten minutes.

The grass question was also dealt with. The supply of hay was a somewhat serious problem in some places and was becoming more so. Brome and Western Rye grass had given the best results as tame grasses. The latter had given rather the larger crops of hay, but had no aftermath of any account, and was not so good for pasture. It hardly required so much moisture and was, he thought, rather easier on the land than Brome. He found that Brome, to make the best hay, must not be let get too ripe, and two crops of hay was about all that could be cut successively without cultivation. If, however, it was plowed or cultivated in August and levelled down, it would be renewed sufficiently to give a new crop of hay the next year. There seemed to be no die to it as a pasture. He had found that Brome seed was ripe about three weeks after it came into blossom. It grows very well in low places and some beautiful patches had been raised on alkali land.

Rape and tares are each splendid for green feed. Timothy, clovers and millet had not given satisfaction as grasses.

Speaking of roots, he recommended deep plowing in the fall and only as light as possible the following spring.

Along the line of fruits, he could say

A FARMER'S SPECIALTY

Incorporated 1899 by Special Act of the
Legislature of Manitoba.

Authorized Capital **\$500,000.00**
In shares of \$100.00 each.

THE WESTERN CANADIAN HAIL INSURANCE COMPANY.

BOARD OF DIRECTORS:

Frank O. Fowler, M.P.P., President.
Angus McDonald, Esq., 1st Vice-President.
Samuel Martin, Esq., 2nd Vice-President.

A. F. Kempton,
T. S. Matheson,
Alex. Blain,

J. Herbert Ingram,
Jos. Cornell, Secretary,
R. J. Neithercut, Treasurer

HEAD OFFICE, WAWANESA, MAN.

Shares of the Capital Stock of this Company are now being sold, ten per cent. payable on allotment. Farmers who invest in these shares will get Hail Insurance at actual cost, with absolute security.

THE UNION BANK OF CANADA, BANKERS.

Address all correspondence to the Secretary of the Company.

that red, white and black currants all do well in the N.W.T. They did not need much, if any, protection, and never fail. Another point was that they were nearly the only fruit which did not need acclimation when brought in from other countries. The Turner and Dr. Ryder, red raspberries, were recommended as being the hardiest. This year the Siberian crab had fruited—the first of the apple family he had seen bear in the Territories. About 20 of the native plums had also borne this season.

Mr. Marker noticed the importance to which the dairy business in Alberta had attained. In 1897 the amount of butter made in one of the creameries in his system was 17,691 lbs.; in 1898 it was 27,136 and this year he thought it would be at least 35,000 lbs. The prices this year were much better than last and the prospects for a good winter's work good. There were several reasons why he would recommend more of the patrons to go into winter dairying, but one of the strongest was that there were much better prices to be obtained and a better market. So far the winter make had netted the patrons about three cents per lb. more than the summer make. There was very little butter made in Ontario in the winter months and less in Manitoba. This left such a good demand that the creameries that had operated in Alberta all year so far had done very well.

He dwelt at some length upon the benefits of co-operation and dealt with duties and privileges of each party, strongly advising patrons to investigate the creamery business, to visit the creamery, find out how things are done, and, in case of any misunderstanding to go to the maker and have his counsel rather than to grumble and kick amongst the neighbors. He found that the most intelligent men were always the best satisfied patrons. He insisted upon the importance of a man keeping account of the productiveness of each cow in a systematic way.

He had heard many definitions of a cow, but the best he knew of was that "a cow is a living machine which turns coarse fodders into fine product." He had been at a creamery in British Columbia, where he had taken from the books the amount of money the patrons had received per cow in one season. Of 41 patrons one had made \$43.50; one had made \$41.00; five from \$30 to \$35; seven from \$25 to \$30; 18 from \$20 to \$25; nine from \$15 to \$20. While the average was 150 lbs. of butter per cow, the best herd made 250 lbs. This showed the difference in good and poor paying cows. He would be willing to lend any reasonable assistance to any man who was anxious to test his herd, and thought the buttermaker would also help him by testing samples. He thought the organization of a testing society might be a good idea.

He advised every one to put up ice and explained how it could best be kept. One caution was imperative, viz., that there be no drafts of air at the bottom. Anyone who was anxious to see how to store it could see at the creameries how it was done. Speaking of the patronage necessary for the opening of a new creamery, he thought there should be at least 400 cows. The cost of building and equipping a first-class creamery was about \$3,000 or \$4,000 and the Government was not anxious to start any new ones unless sure they would pay. He also spoke of the splendid satisfaction which cream receiving stations and skimming stations were giving.

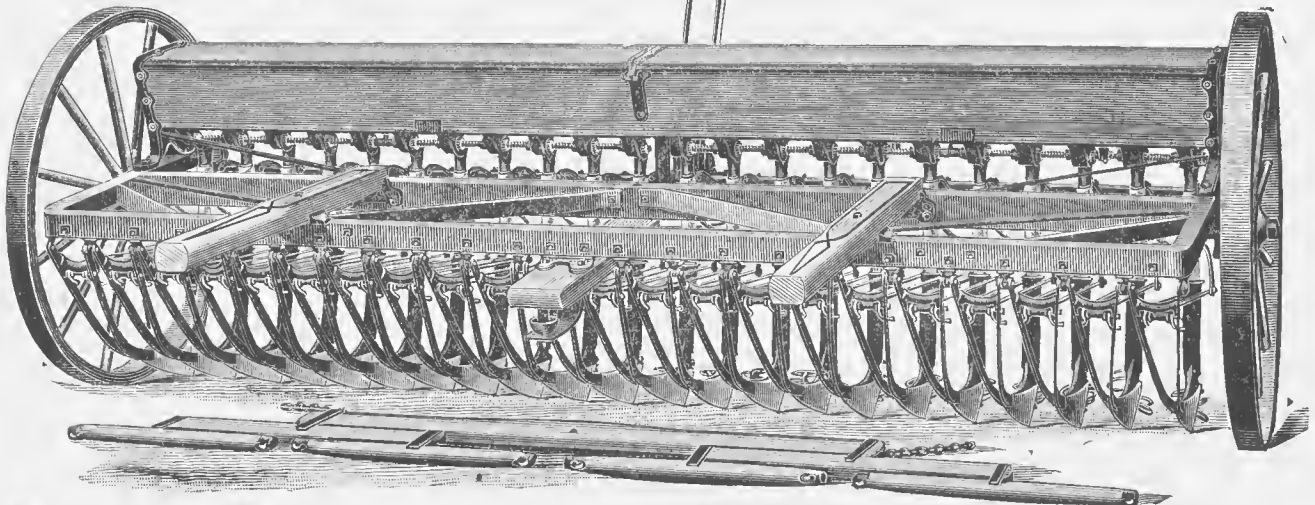
Mr. Willing's address on weeds, being upon a subject upon which the Alberta farmers had not heard very much, was very closely followed. He exhibited specimens of the varieties most likely to do harm and the enquiries and remarks of the farmers proved that a good deal of enlightenment along this line was needed. In one of two cases farmers had brought in specimens for identification, but most

had overlooked this privilege. He stated that two per cent. at least of the grain threshed was weed seeds and that a loss of a million bushels was thus entailed every year. The different weeds were classified and it was shown how it became necessary to understand the nature and habits of a plant in order to combat it in the best way. The fallow was strongly recommended for many of them.

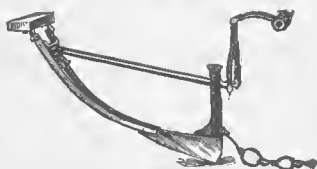
Perennials, as a rule, required to be prevented from forming leaves for one year. Ball mustard, false flax, wormseed mustard, and a few other weeds, were getting much too prevalent to be comfortable. Ball mustard was largely spoken of as "that yellow weed." He specially mentioned it and recommended its being constantly pulled when not in such quantities as to demand a fallow. Stink weed was also found growing in a small way at one place and was specially warned against. Shepherd's purse, although not a very bad weed, had spread very rapidly. Sweet grass is one of the worst of the weeds here, and demanded deep plowing. The use of weeders or harrows for killing buckwheat and pigweed was dwelt upon. He insisted that a man could never be sure he was free from weeds to stay free, remembering how the seeds drift on the snow and are carried about. The ordinance demanding the cleaning of threshing outfits when moving from farm to farm was explained and farmers who had binders which had cut other crops were urged to always see that all seeds were cleaned from the table. Then, too, the man who sowed anything but perfectly clean seed was his own worst enemy.

Mr. Trant dealt with the work of the Agricultural Societies and said he thought that a large number of the members had a misconception as to their duties. Too often all responsibility was shoved off on to the secretary and then at the annual meeting fault was found because he took too much upon himself. He took up the

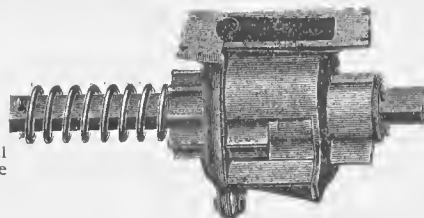
DOWAGIAC SHOE DRILL



THE GREATEST SUCCESS IN THE HISTORY OF GRAIN SEEDING MACHINERY



This is the original and only genuine Dowagiac Seed Drill Shoe.



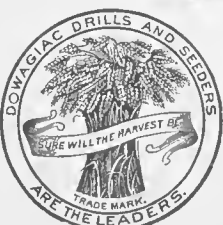
The closest fitted and most accurate feed in existence.

Lathe fitted, and the spring keeps all parts together even after years of wear.

SEND FOR CATALOGUE.

Dowagiac Manufacturing Co.
Dowagiac, Michigan.

U.S.A.



Look for the Sheaf of Wheat on the grain box, and do not accept an imitation for the real Dowagiac.

We are sole manufacturers, and no others are authorized to use the name.

Best Timber in Speight Wagons.

If you have no dealer convenient, write directly to us for information.

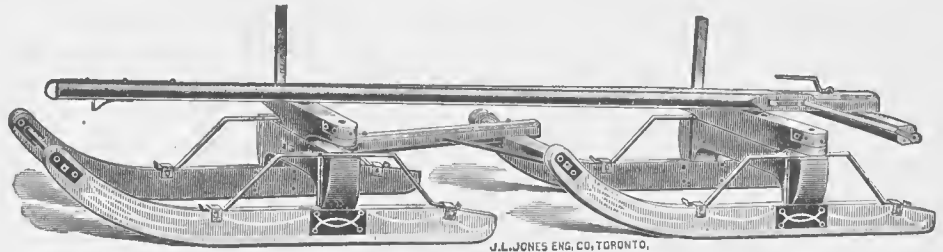
The Speight One-Beam Bob-Sleigh

For general use in Manitoba, N. W. T. and northern part of Ontario. Furnished with regular bolsters; 38½, 40 or 42½ inches between stakes, or with log bunks and clevises.

2 in. Runner	2¼ in. Steel or Cast Shoe	6 ft. long
2½ " 3	2¾ " 3	6 " 6

Improved with Cast Channel Shoe projecting on each side of runner, protecting the woods and bolts.

Whiffletrees, Doubletrees and Neckyokes extra.



J.L. JONES ENG. CO. TORONTO.

THE SPEIGHT WAGON CO., Markham, Ont.

Dealers should write us for Catalogue and Prices.

matter of "attractions" at the fairs, and divided the farmers into those who wanted a circus and those who wanted an agricultural fair. If a society was into the show business it should hold one every year as a relapse was sure if the fair was dropped for a year or so. He also spoke upon the profit of institute work in connection with the Agricultural Society.

Early Cutting.

A peculiarity of the present harvest season is that it is one of the cases in which it paid a man to be a little slow. The energetic farmer who cut his grain on the green side to keep it from freezing is a loser, while his more easy going neighbor who trusted to fortune or simply did not exert himself to cut his grain until it was ripe and the weather fine, is a big winner. The expected frost did not come. The weather cleared up beautifully and finely and grain that was considered hopeless a few weeks ago is being put in stack in good condition. The man who could ensure himself half a crop by cutting early has his half crop safe enough. But his neighbor who did not cut so early has a full crop. Grain that was cut during the rainy weather of August and early September will at least contain a lot of light grain, which will be a corresponding loss to the farmer. At the same time it would not be well to use the experience of this year again. Another year of like unfavorable weather at the time for harvest, and the man who cut early would have half or three quarters of a crop while the man who did not cut so early would get nothing. These remarks, of course, only apply to wheat. Oats, which used to be the staple of the district, and are still nearly half the acreage, never were thought to be in danger and are turning out a big, safe crop.—Edmonton Bulletin.

Credit has killed more farmers than it has helped. Like temper, it is an excellent thing to have, but be careful and not lose it.

Wetaskiwin, Alta., Agricultural Society recently made a cash purchase of 40 acres of land for grounds. The price was \$480.

A new flour mill at Indian Head, Assa., has been fitted up with the best modern equipment and is in the hands of first-rate practical men.

The Kansas bureau of information has shipped east samples of corn seventeen feet high; also tomato stalks six feet high, with fruit to the very top.

To Farmers and Farmers' Sons.

We believe no class of men deserves to enjoy the benefit of life insurance as much as farmers. There is certainly no class which needs it so much. The property a farmer leaves to his widow is usually in land, which, as a rule, cannot be made to earn interest, no matter whether men are hired by the widow to work it or whether it is let to another farmer. The wealth of other classes is usually left in money or village property, which earns interest without any trouble. The widow of a farmer is therefore under a serious disadvantage, even if she owes nothing on the farm in the form of a mortgage. When there is a mortgage the property is surely lost, unless she has the insurance money to pay the mortgage off. The fact is, and every person knows it, \$2,000 in cash will give a widow more comfort and income than a \$5,000 farm.

Fortunately there is no class which is in so good a position to avail themselves of this benefit as farmers. The professional man, the business man and the mechanic are liable to have their incomes cut off at a moment's notice, whereas the farmer's income, though perhaps smaller, is more certain, if he lives—"Aye, there's the rub"—if he lives.

The foundation principle of the Great-West Life Assurance Company is mutual protection and assistance. No one man would be justified in saying to his neighbor: "If you will give me \$100 per year, I will give your family \$5,000 when you die"; because his neighbor might die in a year, and thus, perhaps, ruin any man who made such a proposal. But when this risk is spread over thousands of members, the contribution from each is only a trifle. If you cannot make that bargain with your neighbor, how can you do it for yourself?

It is surely not necessary to dwell on the benefits of life insurance. We shall only give a quotation from Rev. Sam. Jones, the noted American Evangelist: "It is not well that the pale wife, who has 'watched you and your children in sickness and in health, and who seals with 'her white and tender hands your eyes in 'death, should be unprovided for after 'you have passed away. It is absolutely 'in your power to prevent her suffering. 'it is your duty to do so. A man's highest ambition in life, next to the salvation of his soul, should be to provide for 'those whom God has committed to him, 'not only while he lives, but after his 'arm is paralyzed in death."

Don't forget that to be poor and weak is to be friendless and miserable, and don't forget that many a poor young girl has gone to ruin because she had not

enough to pay for the bare necessities of life.

Any agent of the Great-West Life can give you the rate for any policy you prefer, but the Company is issuing a policy particularly suitable for farmers.

There is no entrance fee to be paid. There is no fee to be paid to medical examiner.

The policy calls for 20 payments only. After three years you can stop payments at any time and receive at death \$50 for every payment you have made.

If you complete your payments you can cash the policy, if you desire to do so.

During the 20 years the Company allows you to withdraw part of your money at any time after the policy is three years old.

The amount of loan available is stated on the policy.

The cash value at end of 20 years is stated on the policy.

In event of death during the 20 years, \$1,000 is paid and policy cancelled.

Write to

THE GREAT-WEST LIFE ASSURANCE COMPANY,

Winnipeg,

Or see their local agent in your town.

A farmer who does not love his business is not likely to succeed. Work with no heart in it is not apt to be well done, for "when the heart strays the work flags."

The forehanded farmer is generally the full-handed farmer. He who keeps well ahead of his work is master of the situation and can take advantage of every circumstance.

Of 3,427,000 acres sown to wheat last fall in Indiana, 397,000 were plowed up, and the rest has made a yield of 6 bus. per acre. So says the state department of agriculture.

The recent high winds, combined with overhaste and carelessness, have been the occasion of the loss by fire of several threshing outfits. In the Dauphin district three machines were burned in one day.

The human race through the many inventions of genius encouraging comfort and ease, is degenerating, becoming less and less. There are smokeless powder, chainless wheels, horseless carriages, boneless men and hopeless governments.

Baron Liebig, an eminent German scientist, predicted years ago serious injury to the race from eating flour impoverished in the grinding of the rich material of the wheat, needful to health, for the phosphates (to quote the "Encyclopedia Britannica") are necessary to the life of all animals.



Continuous Work Necessary.

It is a recognized principle in land cultivation that in order to secure the best results in weed extermination it is necessary to continue cultivation until the close of the season. Very many of the gardens of our country show an utter disregard of this principle. This season they have ripened enough seed after July or August to start a large crop next year. It is very well to start in bravely and cultivate until the vegetables get a good start, but it does not do to allow the place a little later on to become covered with shepherds' purse and a score of other troublesome plants. Especially do we mention shepherds' purse, because we have seen so many gardens this fall completely overrun with it. Then, too, being a winter annual, any young plants left in the soil this year will not winter kill but will ripen seeds very early in the spring.

Cultivated Plants.

Now and then we introduce a new plant into cultivation, when, of course, it becomes acclimatised, or naturalised. But the origin of vast numbers of the cultivated plants of all countries dates from a time far prior to ours; is lost, indeed, in the mists of antiquity.

There are few the beginning of which can be traced from wild plants, and even then their supposed progenitors are commonly found in the vicinity of inhabited places, so that a suspicion remains that the supposed ancestor of the cultivated one may be only a degenerated field or garden plant. Man has, however, so entirely changed the character of the plants by cultivation—by forcing their growth within a certain limited time, by cutting them down instead of allowing them to shed their seed, by taking them indoors at the approach of winter, by selecting the best varieties, and by a hundred other devices—that it would be an idle task in the great majority of cases to identify the domesticated species with the wild ones, even could they be found. It is probable that from the earliest dawn of the rudest civilization, man reared grains and other plants.

The inhabitants of the Swiss lake dwellings, we know from the charred remains in mud around their houses, cultivated some kinds of cereals, and when America was discovered the Indians were planting the maize. The oldest records of the Hindoos and Chinese represent them as growing rice; and in the oldest Hebrew books the juice of the vine is mentioned as making glad the heart of man. But written and traditional history is only the most minute fragment of the story of our race. At all events, like the domesticated animals, the cultivated plants are of a very remote antiquity. If, however, the distribution of the plants yielding the chief food products is studied, it will be found that they cluster, to a large extent, on each side of the line which Unger has termed the bromatorial, and that the greater number of them are in the warmer regions of the Old World.

Taking 770 nutritious species yielding notable amylaceous (starch-bearing), oily, saccharine, acidulous, or saline products, Unger found that 566 belong to the Old,

204 to the New World. The tropical zone is rich in these alimentary plants. In the Southern Hemisphere there are comparatively few, and in Australia so much is this the case that explorers perishing of hunger in the interior of that island continent have found no other plant than the "Nardoo"—the spores and seed cases of *Marsilea macrocarpus*, a fern-like plant—on which to subsist. In the Northern Hemisphere the western portion is poorer in useful plants than the eastern portion, so that we may draw a line from the Moluccas to Ireland, round which will cluster the most important cultivated plants whose homes are in the East India Archipelago, in Further India and Hindostan, in Persia, Armenia, in the Caucasus, the Crimea, Greece, and Central Europe. This Bromatorial Line is found to extend through America, by way of Brazil and Peru, to Guiana, Ecuador, Central America, the West Indies, and Mexico. The richness of these lines in food plants may have determined the routes which the races of men adopted in their early migrations into Europe at least—though what laws govern the growth of these useful plants we do not at present know.—From "Our Earth and its Story."

Apples In Minnesota.

Zealous amateurs in the State of Minnesota have been grappling for the last forty years with the question of hardy fruit growing. Begun by such pioneers as Professor Budd, of Iowa, and Peter Gideon, of Excelsior, Minnesota, a great deal of hard work and not a few failures were reported. But victory has in more than one case crowned their efforts and several very valuable varieties have been originated, mostly by Mr. Gideon. It would be tedious to recount the many methods he tried, and the promising indications that came to nothing. The winters of 1872-3 and 1884-5 made sad havoc with not a few of their most promising varieties and the last winter was quite as trying as any that have gone before. But in spite of this severe test the zealous horticulturists of the southern section of the State were able to place at the recent State fair close on 500 varieties of apples and crabs, though, as is well known, this has been an off year for apples everywhere. There was an extremely heavy crop last year and no doubt the buds were weakened by the severity of the last winter. J. S. Harris is one of the most zealous of those fruit growing enthusiasts and he put up a stand on which he showed 237 varieties, each labelled and showing the name and post office address of the grower. Another exhibitor had 50 varieties. Mr. Gideon had several and a large collection of Russians with their hybrids from the orchard of the late A. Peterson helped to make up a most valuable testimony to the possibility of apple growing across all the south half of the State of Minnesota.

It should be understood that apple-growing has got far past the experimental stage. Large orchards of such apples as Wealthy and Duchess of Oldenburg are now common and commercially profitable. Root killing was one of the chief sources of loss last winter, and all trees on a north and northeastern slope proved much more hardy than those of the same sorts grown on southerly exposures. Sheltered valleys suffered much more than open and high grounds. Protection on the west side has always been beneficial. Yearling trees suffered most and the damage shaded off to nothing as the trees got older. In Wisconsin the damage from last February's cold was most noticed at the roots and it is probable that some dry mulch would be a help to the roots. On the

whole the experience of this State gives every indication that in all parts of Manitoba not more than 1,000 feet above sea level there is great probability that in good hands apples may become a regular part of the fruit crop before many years have passed.

Wood ashes should be all saved under cover during the winter, then spread on the garden in the spring, particularly around fruit bushes and trees. Not close to the roots but out as far as the leaves extend.

A French naturalist asserts that if the world should become birdless man would not inhabit it after nine years' time, in spite of all the sprays and poisons that could be manufactured for the destruction of insects. The bugs and slugs would simply eat up our orchards and crops.

Shoal Lake, Sept. 25th, 1899.

I hereby wish to publicly thank the North-West Fire Insurance Co. for the prompt and liberal manner in which they settled my recent loss by fire, amounting to \$1,429.32, and would recommend any person wishing to deal with an honorable company to insure with the North-West. (Signed) JOHN WILTON.

OUR WALTHAM WATCH

in Solid Silver Case, \$7.50

(ladies' or gent's size) is the best value ever offered and we guarantee it a thoroughly reliable timepiece. Sent by mail, post paid, upon receipt of price.

Andrew Co.

WATCHMAKERS AND JEWELLERS,
McIntyre Block, - WINNIPEG.

BARLEY WANTED.

We are now in the market for

GOOD BREWING BARLEY

Farmers threshing early will do well to forward us samples.

EDWARD L. DREWRY,
Redwood Factories, WINNIPEG.

DON'T MISS THIS!

These Trees will Grow.

I have this year an exceptionally good stock of
**FRUIT BEARING PLANTS AND
TREE SEEDLINGS.**
and offer for fall delivery Strong Seedling Trees at
\$5.00 per 1000, or

A Collection for \$5.00

To consist of 100 maple or cottonwood seedlings, 100 southernwood or willow cuttings, for hedges, 100 raspberry (4 var.), 25 currant and gooseberry (4 var.) 6 rhubarb. The fruits are bearing sizes and the varieties the best suited to the climate.

H. L. PATMORE, Brandon, Man.



Three Scenes.

I.

By the doorway stood the mother
On her young face lines of care
By her side a child was standing
With her hands she smoothed his hair.

And she fastened close his garments—
Tied a scarf about his head—
Kissed his rosy lips of laughter—
"Be a good boy, Frank," she said.

And her mother heart was praying,
As she stood there watching him
Run along the country roadside
Till her eyes with tears grew dim.

II.

By the doorway stood the mother
On her face deep lines of care;
By her side a youth was standing,
With her hands she smoothed his hair.

As she brushed his dusty garments
Fastened close his coat, once more;
"Be a good boy, Frank," she faltered,
Kissed his lips as oft before.

Tears choked out her simple language
As he left the humble home.
He had dreamed of wealth and power
And his spirit longed to roam.

Ah, those tears we shed in sorrow,
Tears of pity and of love,
They shall shine, the brightest jewels
In our crown of joy above!

III.

Slit marred prisoners by the railway
Waited for the coming train
That should hear them soon to fetters
They had bartered right for gain.

Tottering along the platform,
Came a woman old and worn
And she passed along before them
In her garments quaint and torn.

In her eyes the fire of fever;
Fever of the brain and soul
Seared the vision of the ruffians,
Like a living, burning coal.

All at once her eyes grew brighter
As she stood before a man
Tall and sunburnt grim and frowning,
Sunk as low as mortals can.

With her hands she smoothed his garments
While the old, fond teardrops start
"Be a good boy, Frank," she murmurs,
"Kiss me once, before we part."

Every face was then averted,
Every eye was filled with tears,
Thoughts of mother, broken hearted,
O'er their worse than wasted years.

Melted hearts and softened faces
That had almost turned to stone,
And one voice spoke full of anguish,
"Mother, I will yet atone!"

"Mother! mother! listen to me!
I shall soon be free again—
We shall once more live together—
You shall never more know pain."

But the tottering, worn-out woman
Could not hear her wretched boy;
She had passed the bounds of sorrow,
Entered into perfect joy.

—Jessie Wiseman.

Household Hints.

By Dandelion.

I have carefully followed all that has been written in the Household columns, and have failed to find any one speaking a word for teething babies. My seven have passed through the process with little or no trouble, and what they have suffered has been directly traceable to errors of diet or some irregularity in the child's life, such as a long day in the heat for berries or some necessary trip to Winnipeg, for where the mother went the baby of necessity went too. The Farmer quoted Chevasse a short time ago,

an eminent English doctor, he is more than that, he is a blessing to any mother who will take the pains to follow his instruction. I may almost say it means immunity from childhood complaints and a good solid foundation on which the health of after life is to be built up.

Chevasse, in his "Advice to a Wife," and "Advice to a Mother," says a baby does not suffer from teething, but it does very often suffer from a disordered stomach caused by injudicious feeding. First he lays down this law: "No farinaceous food of any kind should be fed to any child under six months of age," and during infancy until 18 months of age it should have specially provided food, fresh each day. One of his simplest foods is very suitable to most children and all the materials are at hand—a slice of bread boiled in water for one hour, beaten to a pulp and mixed with an equal quantity of milk from one healthy cow, sweetened with brown or white sugar, according to the state of the child's bowels. If accustomed to a bottle this food can be given through it, if not, it may be spoon fed.

Now one for a child that suffers from too much freedom of the bowels—if it is really summer complaint; a teaspoonful of syrup of rhubarb will certainly carry it off. I have never, but once, had to repeat the dose. The food is dry flour pressed into a basin, covered with a cloth and boiled for four hours, when cold, turn out and grate. It is to be used as corn starch, with equal quantities of water and milk from one cow. Kept in a tin it will last a long time. A cheerful healthy baby is a great possession, but a fractious teething one is anything but a help to the mother or comfort to the tired father at his home-coming.

And now I would like to add a word on a subject on which I have had reason to feel very strongly—carelessness in carrying infection. Ruskin truly says, "The half of man's suffering is caused by man's inhumanity to man," and surely it is inhuman to spread disease, thereby causing much suffering to children. Mothers, who have children, be careful for the sake of your own, and if yours are suffering, prevent in every way the spread of disease germs. The best method is to isolate yourselves during the course of the disease and then to close the home as tightly as possible and burn sulphur. The fumes will penetrate every crack and kill every thing that lurks around dark corners. Surely bachelors, who like to be hospitably received in families, may be expected to abstain from visiting infected houses until fumigation has been properly carried out. Every mother will echo what I say—and tender her heartfelt sympathy when I say my family were all down at once with diphtheria and after recovery, the flower of the flock laid down and died from paralysis of the heart, a frequent follower of that dread disease.

May God in His mercy grant that fathers and mothers will carefully co-operate in stamping out disease in their own homes and prevent the grown-up sons and daughters from wilfully scattering seeds of sorrow around the land, thereby causing unnecessary suffering to children and heart-breaking trouble to parents.

CATARRH CAN BE CURED.

Catarrh is a kindred ailment of consumption, long considered incurable; and yet there is one remedy that will positively cure catarrh in any of its stages. For many years this remedy was used by the late Dr. Stevens, a widely-noted authority on all diseases of the throat and lungs. Having tested its wonderful curative powers in thousands of cases, and desiring to relieve human suffering, I will send free of charge to all sufferers from Catarrh, Asthma, Consumption, and nervous diseases, this recipe, in German, French or English, with full directions for preparing and using. Sent by mail by addressing, with stamp, naming this paper, W. A. NOYES, 920 Powers Block, Rochester, N.Y.

HAMMOND'S 20th Century

FUR

CATALOGUE

NOW ISSUED.

Showing Models of
all the latest styles
in Furs, and Prices.

Sent to any address Free.

HAMMOND, High-class
FURRIER,
Winnipeg.



Do you need
FURNITURE

of any kind? Our new
big illustrated Catalogue
will be sent you free.

SCHOOL DESKS always in stock.

SEND FOR COPY.

Scott Furniture Co.
WINNIPEG.

Largest Dealers in West Canada.

EPPS' COCOA.

GRATEFUL COMFORTING
Distinguished everywhere for Delicacy of Flavor, Superior Quality, and Highly Nutritive Properties. Specially grateful and comforting to the nervous and dyspeptic. Sold only in 1-lb. tins, labelled JAMES EPPS & Co., Ltd., Homœopathic Chemists, London, Eng.

BREAKFAST SUPPER
EPPS' COCOA.

We

Keep the largest
supply of Sheet
Music, Music
Books, etc., in

Western Canada. Titoff's, Skinner and Peter's editions
Violins, Banjos Guitars and Mandolins from \$5 up
Autoharps \$2.50 upwards.
Send for one of our TEN BAR AUTOHARPS, \$5.

BARROWCLOUGH & CO.,

BOX 928. 470 Main St., Winnipeg.

I Didn't Think.

If all the troubles in the world
Were traced back to their start,
We'd find not one in ten begun
From want of willing heart.
But there's a sly, woe-working elf
Who lurks about youth's brink,
And sure dismay he brings away—
The elf "I didn't think."

He seems so sorry when he's caught,
His mien is all contrite,
He so regrets the woe he's wrought,
And wants to make things right.
But wishes do not heal a wound,
Or weld a broken link;
The heart aches on, the link is gone—
All through "I didn't think."

I half believe that ugly sprite,
Bold, wicked "I don't care,"
In life's long run less harm has done
Because he is so rare.
And one can be so stern with him,
Can make the monster shrink;
But lack-a-day, what can we say
To whining "Didn't think."

This most unpleasant imp of strife
Pursues us everywhere,
There's scarcely one whole day in life
He does not cause us care;
Small woes and great he brings the world,
Strong ships are forced to sink,
And trains from iron tracks are hurled
By stupid "Didn't think."

When brain is comrade to the heart,
And heart from soul draws grace,
"I didn't think" will quick depart
For lack of resting place.
If, from that great unselfish stream,
The Golden Rule, we drink,
We'll keep God's laws and have no cause
To say "I didn't think."

—Ella Wheeler Wilcox.

The Prairie Fire.

"Maggie, I see smoke out toward the southeast. Climb up on the house, and see how far away it is," called Mrs. Jones to her fourteen-year-old daughter one windy day in November. Without answering, and without waiting for a second bidding, Maggie jumped quickly upon a barrel standing near the house, and from that climbed to the roof of the one-story annex. Not being satisfied with the view from this point, she scrambled lightly and easily to the top of the main building and stood on the very edge of the steep roof, steadying herself by the chimney. She looked long and carefully, and then gave her opinion slowly:

"It is not more than fifteen miles away, and coming right toward us."

"And the wheat-stacks are right in its path! I wonder if the men have plowed around them?"

"No; they said they were going to do it to-morrow."

"Look and see if the men are coming." Turning her head in another direction, Maggie announced that they were not in sight.

"Shall I go after them?" she asked.

"No; they will come when they see the fire," was the reply. "Come down and help get ready for it."

Then Maggie descended from her lofty post of vantage, and hurried to assist her mother in making preparations for the defence of their home from the dreaded fire.

"Hitch to the gang-plow and drive up to the stacks to be ready when the men come," commanded the mother.

"Let Mary do that; she can harness the horses much quicker," Maggie replied. "I will help fill the water-barrels."

At this suggestion Mary ran rapidly to the stables, but in a few minutes she came back and cried out excitedly: "There are only two mules here!"

"Take Pete, then," said the mother, while pumping water vigorously. "Maggie, bring him up!"

While Mary returned to the stable to throw the harness on the mules, Maggie hurried to where the broncho was picketed, pulled the pin, and then, making a

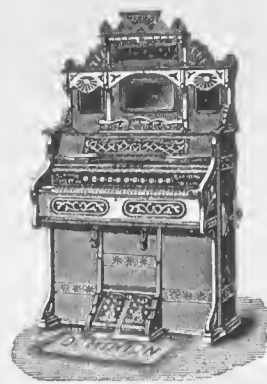
"DOMINION" ORGANS & PIANOS.



Are the most popular
Instruments
manufactured in Canada.

60,000 IN USE.

Write for Catalogue
and Price to
**DOMINION ORGAN
AND PIANO CO.**
BOWMANVILLE, ONT.
Or apply to our Agents in all
parts of Manitoba and N.W.T.



Grocery Economy.

We sell "Empress" Pure Indian Tea (in 1 lb. full-weight lead packets) to consumers at the wholesale price, 35 cents per lb., and with the understanding that if "Empress" is not as good, or better, than the tea you get elsewhere for 50 cents, and perfectly satisfactory to you in every way, it can be returned at our expense, and your money will be refunded.

Our Japan Tea, at 35 cents, is the same as you will pay 50 cents for in other stores, and is also guaranteed to give perfect satisfaction.

You can save in the same proportion on all the teas you buy from us, and you can also save largely on many other groceries.

We pay freight on goods as explained in our Fall Grocery Catalogue, and the guarantee "Satisfaction or your money back" applies to everything you buy from us.

Write for our Catalogue No. 9.

SMITH & BURTON, Brandon, Man.

loop of the rope, placing her foot in it and swung herself to his back. With the long rope dragging on the ground, she galloped back to the house just as Mary was bringing the mules from the stables. After throwing the remaining set of harness on Pete, and tightening buckles here and there, to adjust them to his size, they soon had the three animals hitched to the plow. A funny-looking outfit they were, the great, ungainly mules and the small, slender broncho, driven by a twelve-year-old girl; but no one had leisure to notice that. Time was flying and so was the fire.

Mary drove towards the stacks, while Mrs. Jones continued pumping, and Maggie ran hither and thither collecting old coats, gunny-sacks, or worn-out dress skirts, which she tied around old broom-stumps or pitchforks for mops. Then, tying some cloth more tightly around another stick, she placed it in the kerosene can to become thoroughly saturated with oil. By this time Mrs. Jones had the trough full of water, and the two backed a big lumber wagon up to the well and lifted two barrels into it. Maggie then jumped in and filled the barrels as fast as her mother handed the water to her in the buckets.

Mr. Jones had seen the fire, and was driving homeward as fast as his team could travel. While still about a mile distant, he had seen the team going toward the stacks, and had sent his oldest son over to them on a detached horse while he and his other boy continued toward home. Arriving there, he took the

horses from the wagon and put them to the one containing the water-barrels. Then, all getting in, they drove up to the stacks just as John had broken two furrows across the path of the fire, which was now not much more than a mile distant. Quick work had to be done if they would save their grain.

Mr. Jones took the rag soaked in kerosene, lighted it, and drew it along the edge of the grass between the fire and the furrows, while his wife and children stood with their dripping mop-sticks to keep it from jumping over the break. Slowly and feebly the back-fire started against the wind to meet the strong head-fire coming onward so rapidly and defiantly—as if scornful of the thought that the little flame was to deal its death-blow. Only a moment more, however, and David had conquered the giant.

The stacks were saved! Mr. and Mrs. Jones sat down to rest and congratulate themselves on their success in saving their wheat, even though the range was lost. All at once Mr. Jones' attention was attracted by something across the way. The side-fire, which had not been extinguished, was creeping slowly toward Mr. Smith's stacks, and they were unprotected.

Now, Mr. Smith was a man he hated. He was a man without any principle whatever—a man who was guilty of every unneighborly act that his imagination could suggest. Two years ago they had quarrelled over a railroad section, where they herded cattle in summer. Mr. Jones claim-

THE NOR'-WEST FARMER FOR 1900



\$1.00

Balance of this
Year and all
of 1900 for

\$1.00



Issued Twice a Month.

Has a larger circulation in Manitoba and the North-West Territories than all other Agricultural papers combined.

Mailing list open for inspection to all advertisers.

Established 1882

The Nor'-West Farmer

The only
Agricultural Paper
Printed West of . .
Lake Superior . . .

Our readers are the leading men in every community.

Nothing but reliable advertising inserted.

RATES FURNISHED ON APPLICATION.

THE STOVEL CO.
WINNIPEG, Man.
P.O. Box 1310.



\$1.00

Balance of this
Year and all
of 1900 for

\$1.00



THE rapid and steady increase in the circulation of "THE NOR'-WEST FARMER" during the past few years will be taken as an encouragement to progress and improvement. The year which is now fast expiring has exceeded our expectations in nearly every way—thousands of new names have been added to our list.

Notwithstanding that "THE FARMER" has been issued TWICE A MONTH—instead of monthly, as a year ago—the standard of the paper has been steadily improved, and we have given almost twice the amount of reading matter.

We would ask our many friends to show "THE NOR'-WEST FARMER" to their neighbors, and induce them to subscribe, thus enabling us to make it the best farm journal in the world.

What our Readers think of "The Farmer."

LOST WITHOUT IT.

"I would be lost without The Nor'-West Farmer. You have the best farmer's paper procurable."—H. K. Bligh, Millwood, Man.

BENEFIT EVERY FARMER.

"Every farmer in the west should be benefitted by reading The Farmer."—J. S. Robson, Manitou, Man.

WOULD NOT BE WITHOUT IT.

"The Nor'-West Farmer is a welcome visitor. Every farmer should have it. I would not be without it for anything."—M. Oughton, Middlechurch, Man.

TIMELY HINTS.

"I consider The Nor'-West Farmer one of the best periodicals for giving timely hints to the farmers that we have."—John Fleming, Jr., Arrow River, Man.

IT'S ALL RIGHT.

"I am well pleased with The Nor'-West Farmer. It is always regular and a good farming paper for the progressive farmer. It is all right."—J. T. Courval, Bates, Man.

WELL PLEASED.

"I am well pleased with The Nor'-West Farmer."—Geo. Wood, Souris, Man.

BETTER EVERY ISSUE.

"I must say that The Nor'-West Farmer is getting better every issue, and it ought to be in the house of every farmer in this great northwest country."—John Smail, Moose Jaw, Assa.

GRAND IMPROVEMENT.

"The fortnightly issue of The Nor'-West Farmer is a grand improvement."—Geo. Wise, Shellmouth, Man.

HIGHLY PLEASED.

"I am highly pleased with The Farmer."—John Ruckle, Macgregor, Man.

VALUABLE BOOK OF REFERENCE.

"I make a bound book of the year's numbers of The Nor'-West Farmer, and they are of more value as a book of reference than they first cost."—Fred Smith, Brandon, Man.

REAL GOOD PAPER.

"The Nor'-West Farmer is a real good paper. It has been vastly improved the last few years."—Alex. D. Gamley, Brandon, Man.

ABREAST OF THE TIMES.

"No farmer can afford to be without The Nor'-West Farmer who wishes to keep abreast of the times."—Thos. Kirkly, Red Deer Hill, Sask.

By subscribing now, "The Nor'-West Farmer" will be sent for the balance of this year and all of 1900 for \$1.00.

ADDRESS—

THE NOR'-WEST FARMER,

P. O. BOX 1310.

WINNIPEG, MAN.

ed the land by right of priority of occupation. Mr. Smith claimed it, because it joined his own land. Neither had any legal right to it, but when Mr. Smith undertook to enforce his arguments with a shotgun, Mr. Jones gave up the contest. Ever since, Smith had tried to annoy him. Only that morning his turkeys had wandered across the fields toward Mr. Smith's house, and when they came home the biggest one was missing.

All these things returned to Mr. Jones' memory as he watched the fire nearing the stacks. And no member of the family was at home, either. He cordially disliked his old enemy, but that grain represented a summer's hard work and a winter's living, and—

"D—d if I see them stacks go up!" he muttered. "John," he called to his oldest son, deliberately, "just drive over and plow around Smith's stacks, while you are at it."

"But, father, I thought you wouldn't let us speak to any of them," John said, wonderingly.

"Well, I calculate you won't need to speak to any of them when they are not at home," asserted Mr. Jones, just as John started.

"Now, come on, the rest of you! I guess we'll have to hustle, for we've wasted time already."

Although the side-fire did not come up with so great a rush as the head-fire, yet it was fully as dangerous in its way, as it spread over more territory and required constant beating with the wet mops. It was much more wearisome, this fighting without the back-fire; and, as if to make them more disheartened, they did not even know that they would receive thanks for it. But they kept at work bravely, and at last their neighbor's property was as safe as their own.

Meanwhile Mr. Smith and his family—who had been away for the day—returned; but, approaching the house as they did from another direction, they failed at first to realize the extent of the danger they had been in. Seeing Mr. Jones and his family seated around the well as if they had a right there, he was about to order them to attend to their own business, when he saw what had been done. Over his face crept the first flush of honest shame that had colored it for years. Then he said, huskily:

"Neighbor, I don't deserve it."

"Well, I guess you would have done it for me," Mr. Jones said, who was secretly a little pleased at having made his enemy humble himself.

"I have been mean—doggoned if I haven't!" continued Mr. Smith, as if the confession were being wrung from the very depths of his soul.

"Well, I calculate I haven't been any too neighborly myself," answered Mr. Jones.

"I was the one to begin it; but from this time on you can be most mighty mean before I'll squeal," the unneighborly neighbor replied, while his voice trembled with emotion as his past unfriendliness rose before his mental vision.

"Don't say another word about it, and we'll both begin over," pleaded Mr. Jones, who began to feel uncomfortable by the other's humility. Then he called:

"Come, children; time for chores!" and a general scramble ensued as the mops and buckets were placed in the wagon and the weary bodies climbed in after them. John, seated on the plow, headed the procession homeward, a younger boy followed on the extra horse, and the heavy lumber wagon, with its occupants, brought up the rear.

Just as the latter were about to start, Mr. Smith relieved himself of a confession that had evidently been troubling him ever since the reconciliation. With a face which

was as red as the tan would allow, he burst forth, as if regardless of consequences:

"I say, Jones, I killed one of your turkeys this morning. Come over to-morrow and help us eat it!"

"We'll be on hand," Mr. Jones said, looking over his shoulder; and then, speaking to his team, they drove silently homeward.—Margaret Yeater, in Northwest Magazine.

Man.

Man is of a few days and as full of trouble as a drunken barber at a coon-dance. He riseth up in the morning with a song of gladness, and then snarls and growls at everybody all day because his wife asked him for two bits to buy an apron.

He can take a \$9 shot gun and go out and hunt for a whole band of grizzly bears, sixteen miles from the nearest wood-camp, but he can't sit for his picture without feeling as guilty as a sheep thief and knocking his knees together like a hay tedder.

A man can have an eye taken out by a travelling oculist without making a sign; but let some one at home step on his corn, and he will shriek like a stuck pig.

A man can lose all his wealth in a prospect hole without saying a word, even to his wife; but he will roar like an enraged lion if he inadvertently sits down on a sticky fly-paper.

A man can go a whole week while out hunting with nothing but straight bacon to eat; but give him a pancake at home with a lump of flour in it, and he will accuse his wife of having been a chef in a section house, and make more noise than a steam threshing-machine being shown off by its proud owner on Main Street.

A man can stand with the calmness of a stoic while an Indian takes his scalp; but let the barber nip his ear, and he will yell like a dog with a sprinkling-can tied to his tail.

A man can walk forty miles over rocky mountains in search of blue-tail grouse; but ask him to pump some water for the wash, and he is too tired to lift anything but his voice.

A man can figure up just how much the war cost; but has no more idea of the price of a calico dress than a Hottentot.

A man may be as strong as Sandow, but he cannot help his wife carry out a wash-tub without getting a crick in his back and walking lame for a week.

A man can meet a man who threatened to shoot him on sight, without a tremor; but let him play pool until after dinner-time, and then see him tremble in the presence of his wife!

A man can work hard for years, trusting and hoping that the public will rise to an appreciation of his work; but when the hired girl suddenly quits, the ambition of a life is submerged in a flood of overpowering calamity.

A man will work and slave night and day to make a home of his farm, and then let it tumble to weeds in his efforts to get an office so that he can rent a house in town.

A man will stay out all night at lodge without saying a word; but if he has to get up and give the baby a drink, he will complain to everyone of the unbroken rest he has undergone.—Bozeman (Mont.) Chronicle.

The purest and best of women always show the deepest and tenderest compassion for their fallen sisters. For a woman to be without sympathy is to be a woman without the highest trait of womanhood.

Orderly Bugler Jim.

Jim lived in a little cottage on the bluff of the river back of the long row of barracks. His father had died at the battle of the Little Big Horn, fighting bravely to the last. They found him with the little squad that had made the last stand, his scalp gone and three bullet-holes in his chest, and they buried him, with the others, upon the field of their glory. Jim remembered well what a sad day it was at the fort in Kansas when the news came, and how the big garrison flag looked as it flapped at half-mast. It seemed full of significance even to a little fellow like Jim. Once he had been over the battlefield, and had seen his father's grave.

His great ambition was to become a bugler. He was old enough to enlist as one—sixteen years having passed over his head, but he was a weak-looking boy, and people had their doubts as to his being able to stand the hardships of a soldier's life. But when he went before the doctors they declared him to be perfectly sound, and he was taken into the army as a bugler.

He still lived with his mother, although most of the soldiers lived in the barracks. Morning, noon and night he sounded calls on his bugle, and, being orderly bugler, he made many trips to "officers' row" with the colonel's messages.

That summer a large band of Indians took the war-path. It was a very large outbreak, and one day the whole regiment marched away to help put it down.

Jim, however, was left behind. He never knew that his mother had gone to the colonel and with tears begged him not to take her only boy from her, and that the colonel, remembering how she had lost her husband, declared that Jim should stay at the fort. But it hurt his boyish pride to think that he had been left behind with the sick, the feeble, and the women; so he went to F troop's barracks to talk it over with Corporal Low, who had also been left behind.

"It's devilish," said the corporal, "but perhaps it's best that you should be left with your mother, after all. It's nasty business, fighting them red devils. You never know when your scalp's safe. And the corporal pulled up his sleeve and pointed to an old scar on his brawny arm.

"That's what I got down in Texas," he continued, "from a little imp no bigger than yourself. So you see it's much better you were here," he added, convincingly.

Jim thought the matter over seriously. "Well, perhaps you're right, corporal," he said. "Only I wish very much that I could have gone."

Then he went away to sound a call, feeling a little more contented. But if he had heard the corporal, the day the men rode away, bitterly cursing his luck, he would never have consented to be consoled by him.

The troops had been in the field about two weeks, when it became necessary to send the colonel some dispatches that had come over the telegraph wire from headquarters. The country between the fort and the regiment was supposed to be free of hostiles and perfectly safe; so Jim was selected to carry the dispatches.

Early the next morning he rode out of the fort with a light heart, the dispatches safe in his breast pocket.

* * *

For three days he rode, sleeping at night on the bare earth, with only his saddle for a pillow, and nothing over him but the bright stars shining so far away in the dark-blue heavens. On the third day after he had left the post, he reached

that part of the country where he had been told he would find the regiment.

Towards evening he came to the foothills, with the mountains looming up only a little way beyond. He had ridden hard, that day, and was very tired, so he dismounted to rest. Even though a little fellow, Jim was a good frontiersman, and he led his horse back some distance from the trail and tied him among the thick foliage, and then lay down beside him, flat on his back.

He had rested but a short time, when he heard the patter of unshod hoofs coming down the rocky trail. At first his heart leaped for joy, for he thought it was the regiment. But he recovered himself quickly, peeping cautiously between the leaves, and listening breathlessly. In a moment he saw three naked Indians, in war-paint and eagle feathers, and astride vicious bronco ponies, come slowly down the trail. He lay perfectly still; no sound betrayed him. The Indians were so intent upon something they were discussing that they never saw the footprints of Jim's horse in the dust of the trail.

They were Sioux, and Jim made out, from as much of their talk as he could hear, that the regiment was somewhere near and that they had been watching it for several days. He also heard them say that their own force numbered more warriors than it ever had before—that this very night the regiment would ride into their ambush, and that they would have another big day, like the one they had a few years before on the Little Big Horn River, when they rounded up Long Hair and his five troops of the Seventh, and cut them to pieces. When they had passed from view, he heard a warrior give a war-whoop in an exultant voice.

Then it became terribly clear to Jim that he must do something heroic to

save himself and the regiment. He couldn't make up his mind exactly what he should do, but he knew it must be done quickly.

When he had waited until he thought the Indians were well out of the way, he led his horse out into the trail and mounted and rode slowly forward. He whistled bugle-calls under his breath, and talked softly to himself to keep up his courage.

He turned his horse sharply to the west, and began slowly to descend the hill. He was leaning over, unfastening his pistol-bolster, and when he looked up again he saw the three Indians right in front of him. He drove the sharp spurs into his horse's flanks, and in a second he was shooting past the warriors at a furious pace, heading for the base of a big mountain a mile in his front. But they were after him like a flash, in a desperate attempt to head him off. He braced himself firmly in his stirrups, and ducked his head in expectation of a volley of bullets. But no bullets came, and the Indians only lashed their ponies viciously and redoubled their efforts to head him off.

Jim knew that in a long race his big grey cavalry horse could beat the Indian ponies, but he expected to be brought down by a bullet any moment, and he felt, somehow, that his life was about to come to an end.

He couldn't make out why the Indians didn't fire on him, he was within such easy aim. Then the real cause of their silence flashed over him. He had heard old troopers tell how, when Indians had laid an ambush and the soldiers were about to enter it, they would sometimes come across a scout, and then they would be compelled to capture him alive or let him escape, as to fire on him would give the men entering the ambush warning.

When the full significance of it all came to him, he never hesitated a second, but pulled out his revolver and fired blankly ahead without taking aim, then shook out the reins on the big grey's neck, and jabbed viciously with his spurs. The grey responded with a will, and plunged down the hill side like a runaway locomotive. He saw things flash past, felt the great beast bounding under him, and then he heard the bang! bang! bang! of the Indians opening fire. He leaned over, flattening himself against the grey's neck, and his heart beat wildly with fear and excitement. Then he felt a sharp pain come into his arm; it felt helpless at his side, and he knew that it was broken. He gave vent to an agonized gasp; the tears came into his eyes and ran down his cheeks, but he wiped them off with the sleeve of his uninjured arm. All at once he heard firing somewhere in his front—a few quick shots, then a heavy volley, then hundreds of shots fired rapidly, and he knew it was the regiment getting into action.

Suddenly his horse dashed round the base of a hill, and there, in a little plain before him, he saw the battle raging. The dear old regiment was between him and the Indians, and he knew that he was saved.

* * *

As a lieutenant caught the bridle of the big grey and brought him to a standstill, Jim pitched forward in the saddle and fainted. But the doctor came quickly, set his broken arm, and brought him to; and after the chase was over, after the last Indian had disappeared over the hills to the west, and the bugles were sounding "recall," the old colonel came and stood by Jim and blessed him for that day's work. He said—and I believe it, although there are some who don't—that he would rather have done what Jim

SMOKERS!

No matter how high the wind
or how rainy the weather,
a good **LIGHT** can be
secured by using

EDDY'S WAX VESTAS MATCHES.



EDDY'S PARLOR MATCHES

CONTAIN

NO BRIMSTONE

and are consequently free from the sometimes objectionable fumes of the ordinary sulphur match. Ask for any of the following brands—

"EAGLE," "VICTORIA,"
"LITTLE COMET."

FOR SALE EVERYWHERE.

did than wear a star on his shoulder-straps.

When Jim opened his eyes, smiled faintly, and then whimpered a little, the eyes of the officers were wet.

The men used to tell afterward that when, three days later, as the regiment was riding homeward, the colonel offered to send the lad to a good school in the East, Jim, who was riding at his side, looked up a little timidly and said:

"I'd rather stick to the service, sir."—By Robert Howard, Jr., in Northwest Magazine.

Discontent.

Good fortune, like the morning mists, has the peculiar and tricky habit of appearing to be thicker at a distance than just where we are. Far-off fields look so much greener than our own bare pastures that some of us get the habit of discontent pretty well ingrained.

And so life goes. Man ne'er is blest. Where'er he roam, or east or west, There's but one dearest, happiest spot—The other place, where he is not.

Ammonia for Cleaning.

In cleaning brushes either used for the hair, sink or floor, use ammonia in the water. A strong solution of this will remove dirt and grease when nothing else will loosen them. Strong ammonia is good for cleaning the sink also, as it eats away the grease that accumulates there. A little of it poured down the sink will often remove obstructions in the pipes and remedy the plumbing that has been stopped up without calling in the plumber. Ammonia is almost as essential for the kitchen as soap and water. It is so cheap to-day that one can afford to use it freely.

Nothing that is of real worth can be achieved without courageous working. Man owes his growth chiefly to that active striving of the will, that encounter with difficulty, which we call effort; and it is astonishing to find how often results apparently impracticable are thus made possible.—Samuel Smiles.

A Wetaskiwin subscriber tells us that his wife thinks so much of the Household Department of The Farmer that she threatens to leave him if he discontinues his paper. We have no fear of his discontinuing it, as a wife who follows our Household Department would be a terrible loss. We are pleased to know that we have the better half on our side, and always welcome any suggestions which tend to make this department of more interest to the wives and daughters.

"My wife," remarked Uncle John Albus with an air of pride and proprietorship, somewhat more prevalent among young husbands in their honeymoons than among old ones who have been married for fifty years or more, as Uncle John was—"my wife is one ov them women the Lord only makes a few ov, and them mighty scatterin'. She's jist ez good natured and happy now as she wuz when I courted her, and I ruther guess that when they come to put her away to rest on the hillside where the grass is wavin' and the birds sing in the mornin's, the flowers won't wait to be planted, but they'll grow kind ov spontaneous like on her grave and blossom because they won't know anything else to do. It's her way to make the sun shine fer twenty-four hours a day, and she does it jist as easy and handy as some women don't."

A Big Puzzle.

I've t'ought it over 'gain and 'gain
But somehow don't quite make it plain,
Why t'ings is as dey be;
No, I ain't makin' no complaint,
But simply sayin' that I kain't
See w'y dis is, an' todder ain't;
But God knows better'n me.

For 'zample, dere's ole Jacob Bean;
Dere ain't on yearth no man so mean,
So orful mean as he.
Now, w'y should he have all de cash,
Eat 'possum fat w'ile I eat hash,
An' look at us as nigger trash?
De Lord knows better'n me.

Den comes my neighbor, Simon Bole;
Jess like a lump in solid gol';
He's good as good can be.
For eighteen weeks he's hen in hed,
Wit shakes dat shook him almos' dead;
But w'y, I don't git fru my head;
De Lord knows better'n me.

Well, I don't hodder 'bout it all;
De Lord's so big, an' I so small
I couldn't spec' to see;
So I jess stumble 'long de way,
Bearin' my hurden day by day,
An' smilin' cos my soul kin say,
De Lord knows better'n me.

—By Rev. Plato Johnson.

"Aunt, has kitty got pins in her toes?"
"I suppose so."
"Don't you wish they were safety pins?"

No matter what size the farm is, the man who owns it should be bigger than the farm, or it will prove a white elephant on his hands. Without skill and judgment and purpose to control it, the bigger the farm the poorer must its owner grow.

Teacher—"Bobby, if your mother gave your sister six apples to divide equally with you, how many would you get?"

Bobby—"None."

Teacher—"Why, Bobby, you'd get three apples."

Bobby—"You don't know my sister."

"Well, Johnnie," said the minister to a little boy. "I hear you are going to school now."

"Yes, sir," was the reply.

"And what part of it do you like best?" asked the good man.

"Comin' home," was the prompt and truthful answer.

Tommy, aged 5, and his cousin Willie, aged 6, had several little altercations in which Tommy invariably got the worst of it. One day his mamma said to him: "Tommy, to-morrow is Willie's birthday; wouldn't you like to give him something?"

"You just better believe I would," was the reply; "but you see, he's bigger than I am and I can't."

"Whisky never misses fire," said a man to us the other day. No, it never does. It is sure to bring down its victim sooner or later, whether he be high or low in the social or intellectual scale. And fluttering all about him will always be the wounded hearts of mother, father, wife, children, sisters, brothers and friends, while beyond and behind all this is too often a trail of ruined virtue and contaminating influences. At least six hearts on an average carry a lifelong, overshadowing, dreary sorrow for every victim alcohol brings down. The undertow of all family and social life is largely silent sorrow and dreary heartache over the victims of alcohol. No, whisky never misses fire, never.

WELL WORTH THE PRICE.

"The Farmer is well worth the subscription price many times over."—W. J. Helliwell, Oak Lake, Man.

Prayer.

Prayer is the soul's sincere desire,
Uttered or unexpressed—
The motion of an hidden fire
That trembles in the breast.

Prayer is the hurtben of a sigh,
The failing of a tear—
The upward glancing of an eye,
When none but God is near.

—James Montgomery.

ONTARIO LADIES' COLLEGE.

Whitby, Ont. Magnificent buildings pleasant and healthful surroundings, and the highest educational facilities in Literature, Music, Art, Elocution, Commercial Branches, and Domestic Science, account for the present marked popularity and success of the Ontario Ladies' College. Not only does it occupy the leading place in sound learning, but in those helpful and moulding influences that go to make up a strong, refined and noble character. Send for calendar to
Rev. J. J. HARE, Ph D., Principal.

BRANDON COLLEGE

Provides thorough instruction for both ladies and gentlemen in the following courses of study:—

PREPARATORY
COMMERCIAL
SHORTHAND
TYPEWRITING
TEACHERS' CERTIFICATES
MATRICULATION } Manitoba
PREVIOUS } University
MEDICAL ENTRANCE
DRUGGIST ENTRANCE

The important problem of how to use the pen well is easily solved in the Preparatory and Commercial Departments of Brandon College. Letter writing and the keeping of accounts then become a real pleasure. Special attention is also paid to the work for Departmental and University Examinations.

College opens Oct. 2, 1899.

Further particulars regarding any of the courses will be gladly furnished on application to

Principal McDiarmid, Box 180, BRANDON, MAN.

NEW! NEW!

Oh! Yes, you do now. You want New Music, and let us give you a ———— er.

We carry the Biggest Stock of SHEET MUSIC in Western Canada.

CATALOGUE ON APPLICATION.

TURNER & CO., COR. PORTAGE AVE & CARRY, WINNIPEG.

ROBT. LECKIE,

IMPORTER AND DEALER IN

Wall Papers & Room Mouldings.

Samples and Prices on application.

425 MAIN STREET, - WINNIPEG.

P.O. Box 317.

SPECIALTIES FOR LADIES & GENTLEMEN.

We can supply any specialties and novelties in Rubber and Metal goods at lowest cash prices. If you require any article whatever which is not to be found in the regular stores, write us, and we will quote you prices. All correspondence confidential. Send 2c. stamp for Circular.

THE UNIVERSAL SPECIALTY CO., P.O. Box 1142, MONTREAL

Direct Connections at Union Depots

are made at St. Paul and Minneapolis by all trains from Pacific Coast and north-western points with the Wisconsin Central Railway, thus affording a comfortable and convenient journey to Manitowoc, Milwaukee, Chicago and Eastern and Southern cities via two modern trains, leaving daily. For further information apply to your nearest Ticket Agent.

JAS. C. POND,

General Passenger Agent, MILWAUKEE, WIS.

THE STEVENS WAGON

Made of sound, well-seasoned stock, carefully selected; iron of best quality, thoroughly tested; and built by expert mechanics in every department.

HIGH WHEEL

Easy running.

STRONG AXLE

Has perfect truss-rod; Skein takes more timber than any other farm wagon.

DOUBLE BOX

Especially built for the requirements of the Northwest.

Strongly recommended to their friends by all purchasers.

Ask for the

STEVENS WAGON

the product of skilled Canadian workmen.



Undoubtedly THE BEST offered

TO THE

Canadian Farmer to-day.

STEVENS MANUFACTURING CO., LONDON, ONT. **WINNIPEG.**
Branch Depot: Grain Exchange Block,

Heaps o' Money.

Every little lassie and every tiny lad,
Has heaps and heaps o' money—it ought to
make you glad!
It isn't in crisp banknotes, nor coins just
from the mint;
This money you have all to use—money
without stint.
You can help dear Grandma Tired, and
mamma pressed with work,
And a regiment of toilers, who haven't time
to shirk;
The coachman, and the gardener; also, too,
the nurse,
With the money you have stored away—full
is every purse!
Oh yes, indeed, you have some and every
bit for use;
Why, lads and lassies, really, it's lying
'round you loose!
Do not spend it carelessly, for you cannot
trade it back,
This wealth—for "time is money," of which
you have no lack!

—Adelbert F. Caldwell.

Points for the Housekeeper.

With the crusade against dirt, visible and invisible, the cane-seat chairs should come in for their share of attention. They require a vigorous scrubbing with brush and warm suds, to which a little household ammonia has been added. Scrub both sides of the seat, rinse well and dry in the open air. Willow chairs are benefited by a bath in warm salt water. If they have lost their natural color, it is said that a solution of chlorine will restore it.

To renovate the tops of writing tables and leather chairs, sponge lightly with warm soapsuds, then wipe over with the white of eggs, whipped stiff.

To clean painted walls, wash with a large sponge dipped in warm water in which suds has been dissolved, using always a downward movement. Change the water often. Wipe dry with waste or soft flannels.

A bit of soap applied to a creaky hinge will usually cure its stiffness and silence its creaking.

Sand soap is recommended as specially useful in the case of small boys, whose hands often refuse to yield to the softer persuasions of ordinary soap and water. It may be made at home much cheaper and better than it can be purchased. Cut into small pieces any pure soap and melt it. When quite soft, remove from the fire and stir into the mixture about half the quantity of clean, dry sea sand that has been well heated. As soon as the mixture is cool enough to handle, roll into balls or cut into squares, and put in a cool place to dry and harden.

A little salt sprinkled on a hot stove will remove any disagreeable odor.

Franklin's time honored and cumulative adage, "For want of the nail the shoe was lost, for want of the shoe the horse was lost, for want of the horse the man was lost," should have the addendum of twine and paper bags put to it to make it complete. Few things are more irritating than to be ready to tie up a package and find no string, or to carry a few apples, oranges, eggs or bulbs a short distance and find no bag to hold them. Strings should always be wound in a ball and kept ready for immediate use where the family may find them, and paper bags, as soon as emptied, should be folded neatly and laid in a drawer for use as needed.

No better covering can be found for the milk or cream jug, the opened can or the gravy boat, when set away with their contents, than a paper pulled over the mouth.—New York Tribune.

TO CURE A COLD IN ONE DAY.

Take Laxative Bromo Quinine Tablets. All druggists refund the money if it fails to cure. 25c. E. W. Grove's signature is on each box.

Water may make a man's boots "tight," but not himself.

Christ says, "Come unto Me." Start, and you are there.

Before woman can be compromised she must compromise herself.

A hypocrite in the church is no better or worse than one anywhere else.

In the moment that a sinner knows that Christ is Christ, he loses his guilt.

When Columbus sighted land he gave men better eyes and enlarged the world.

Men worthy to serve God for gain are willing to serve the devil for nothing.

When the devil is most like a roaring lion he is most careful to hide his teeth.

Selfishness is self-robbery, no matter whether it dwells in a hut or a palace.

No man can read his "title clear to mansions in the sky" unless he has a clear title.

A lying epitaph never mends a bad life. The devil's "sermons" are often "in stones."

Stepping heavenward is stairclimbing, not star. There is no stepping downward—it is sliding.

More than one man who can see the mistakes of Moses, is stone blind to his own.

Knock down a hypocrite and you will upset a bigger one who is hiding behind him.

Building on a rock is an investment that pays dividends with every thunder-clap.

A woman can achieve more by ten minutes of gentleness than a man can by an hour of violent bluster.

There are people who consider looking dismal on Sunday and giving away an old coat, taking up the cross and following Christ.

J. I. CASE THRESHING MACHINE CO.

Racine, Wisconsin.

Manufacturers of
the Celebrated

'CASE' Engines, Threshers & Powers.

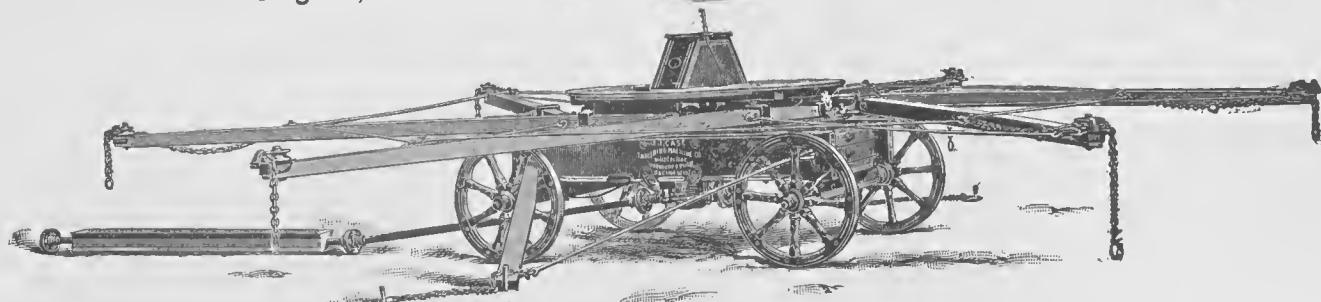


For Information write

WINNIPEG BRANCH,

Cor. Princess & James Sts.

D. B. MACLEOD, Gen. Agent.



THE "WOODBURY" POWER

(Dingee Pattern)

Is the only RELIABLE Horse Power.

WRITE FOR OUR 1899 CATALOGUE OF

Engines and Separators.

October Plowing.

When all the golden stuhbles and the fallows
grey and lonely
Are brooding in the glamour of an Indian
summer haze,
When the nights are keen and frosty and the
sharp air melloes only
Into noonday dream and glory in these crisp
October days,—

'Tis then I like to start my plow upon the
upland meadows,
In the sparkle of the morning when the
clear-sweet skies are blue,
When all the leafless maples cast their trac-
ery of shadows,
And far-blown leaves across the fields
their faded glories strew.

Below I see the valley hrimmed with heguil-
ing splendor,
Afar the ripened distance is lost in pur-
ple woods—
Oh, cool and hlithe the mornings, the after-
noons are tender,
And crimson is the glow that lights the
evening solitudes.

And as I walk behind my team I note the
sunshine falling,
And all the lingering beauty that watchful
eyes yet see,
While wind and field and forest their mes-
sages are calling,—
And somehow all the autumn world's a
pleasant place to me.

—L. M. Montgomery.

A Woman Can Either Make or Mar the Home.

We believe in cooks, we admire good housekeepers, but there is ever so much more than the knowledge of how to make bread or manage servants necessary before home becomes actually what its name implies. It is a dangerous experiment, we admit, for a girl without the first idea of culinary laws to start out with a menage of her own, but we guarantee that if she possesses the true homemaking instinct the first emergency that throws her on her own resources will bring to the front all those latent powers which she has heretofore had no occasion to exercise.

A home is the dearest spot on earth. Every stick of furniture speaks its individual language of welcome and repose, and this spirit emanates always from the feminine head of the family, who can either make or mar it, according to her own manner and way of doing. Haven't you been in some houses where the meals prepared by the skilful hands of the mistress were absolutely perfect, but where they were eaten in such an atmosphere of frigid formality that even the puffiest biscuits lay heavy on your con-

science at least, and it was a relief to escape to some less pretentious abode, where, perhaps, the chops were underdone and the soup very watery, but where a cheery hostess made you forget these imperfections and caused you to go away thinking in all honesty that you had enjoyed a very superior form of cooking indeed.

Good cooking is not the fundamental principle of domestic happiness as much as it may be prated by some people. It is a very pleasing adjunct, and one not to be lightly thrown aside, but the real homemaker must possess other attributes that will last during those many intervals between meals when even the thought of food has no power to charm.

When a man sees no way out of a difficulty, there is always a woman's way.

The closer we get to nature's gifts the more we find their abounding richness.

It is so unnatural for a woman to be selfish that, when she is so, she is apt to be thought more selfish than any man can be.

A man seeks and demands a woman's first love. A woman feels most secure when she feels that she has a man's last love.

An honest avowal of love is always considered by a woman, whether she reject or accept it, as the highest recognition of her womanhood.

There may be nothing new under the sun, but there are many new things under the moon which we all pretend to see and which nothing would persuade us to speak of.

Don't grumble if you must work hard for your money. God did not give labor as a burden to humanity, but as a boon, when he said, "Thou shalt earn thy bread in the sweat of thy brow."—Dr. L. A. Crandall, Baptist, Chicago.

A prize offered by the Society of Arts for the best material for cleansing fabrics without discoloration or injury, has been awarded to a preparation of which the potato is the base. Two good-sized potatoes are grated into a pint of water, strained through a coarse sieve into another vessel containing a pint of clear water and allowed to stand until thoroughly settled, when the clear liquid is poured off, and used to sponge materials, which are then washed in clean water, dried and ironed. The sediment can be used for cleaning carpets, etc.

Doing Our Best.

We sometimes learn great truths from the unlettered and illiterate. Even the slang phrase of the street or gutter sometimes expresses the sentiment of a philosopher in the rough. Recently a small boy, wanting his chum to use his best efforts to assist him in some scheme ventured this striking advice: "Git close to yourself, Jem, and do your level best." It is very seldom that we do our very best in any undertaking, yet it is what we ought always to do. It is nearly a moral impossibility for us to do our level best until we get close to ourselves. We need to get very close to ourselves to be able to see and know ourselves as we are. We live too far away from ourselves in a superficial or ideal realm, and thus fail to appreciate our native ability; or, we live the ideal, and greatly exaggerate our ability or mental worth. "Know thyself" is the old maxim, and implies the act of getting close to self to study it, and know it in its native surroundings. Self is an important factor in all of our lives, yet how little do we study it to know all its powers and capabilities.

The man who thinks all the time and never acts is a stick. He is too sleepy to succeed. The man who acts all the time and never thinks is a plodder. He does what others tell him, but does nothing that he tells himself. The successful man not only thinks all the time, but backs up his thinking by acting and advertising in this paper, which will yield a good return.

W. W. Pendergast, state superintendent of public instruction for Minnesota, in a lecture on "Education," at Redwood Falls recently, among many other practical sayings, set afloat the following criticism: "We are paying about \$4,000,000 per year for our state schools," he said. "We are paying \$24,000,000 for rum, something that does a man no good; \$6,000,000 a year for tobacco; \$6,000,000 for confections, \$14,000,000 for nameless other evils, and we do the latter without grumbling, while we grumble loudly at having to pay school taxes."

STOCKMEN AND MIXED FARMING.

"The Farmer is a fine paper, well suited for stockmen and mixed farming."—H. A. Hurlbert, Caron, Assa.